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No. 2333

United States

Circuit Court of Appeals

For the Ninth Circuit

HENRY W. BASSETT,

Plaintiff in Error.

vs.

THE ERICKSON CONSTRUCTION COMPANY,
a Corporation


Defendants in Error,

Transcript of Record

Upon Writ of Error to the United States District Court of the
Western District of Washington, Northern Division

FILED

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RICHARD J. COOK, Esq., Attorney for Plaintiff
in Error.

Suite 616 Hoge Building, Seattle, Wash.

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in Error.

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in Error.

1002-5 Alaska Building, Seattle, Wash.

*In the Circuit Court of the United States in and
for the Western District of Washington, North-
ern Division.*

No. 2059

HENRY W. BASSETT,

Plaintiff,

vs.

THE ERICKSON CONSTRUCTION COM-
PANY, a corporation,

Defendant.

November Term, A. D. 1911.

DECLARATION.

The said Henry W. Bassett, as plaintiff, complains of The Erickson Construction Company, as defendant, and for cause of action alleges:

I

That the plaintiff, Henry W. Bassett, is, and at all the times hereinafter mentioned, was a resident of the City of Seattle, King County, Washington, and a citizen of the said State and of the United States and an inhabitant of the Western District of Washington, Northern Division.

II.

That the defendant, The Erickson Construction Company, is, and at all times hereinafter mentioned, was, a corporation organized and existing under the laws of the State of Washington, and is,

and at all times herein mentioned, was engaged in the business of constructing sewers in the City of Seattle, King County, Washington, and in the Western District of Washington, Northern Division, and that it is maintaining, and at all the times herein mentioned, has maintained its office and principal place of business in the said City, County, State, District and Division.

III.

That heretofore, and prior to the 18th day of March, A. D. 1910, the plaintiff, Henry W. Bassett, was the true, original, and first inventor of certain new and useful improvements in Forms for Molded Conduits, not known or used in this country, and not patented or described in any printed publication in this or any foreign country before his said invention or discovery thereof, or more than two years prior to the date of his application for a patent therefor, and not in public use or on sale for more than two years prior to his hereinafter recited application for a patent therefor; nor abandoned, nor was it proved to have been abandoned; that said invention has not been patented in any country foreign to the United States or an application filed by him or his legal representatives or assigns more than twelve months prior to his application.

IV.

That the said plaintiff, Henry W. Bassett, being as aforesaid the true, original and first inventor thereof, did, on the said 18th day of March, A. D. 1910, file his application with the Commissioner of

Patents, and in the United States Patent Office, for letters patent, and in accordance with the then existing acts of Congress, and complied in all respects with the conditions and requisitions of said acts, and thereafter, to-wit: On the 25th day of April, A. D. 1911, letters patent of the United States, signed, sealed and executed in due form of law, for the said invention or discovery were issued and delivered to the said plaintiff, Henry W. Bassett, and numbered 990417, whereby there was granted and secured unto him, his heirs, executors, administrators and assigns, for the term of seventeen years from the 25th day of April, A. D. 1911, the full and exclusive right of making, using, and vending to others to be used, the said improvements. That the said letters patent are now of record in the patent office of the United States and the said letters patent, or a duly authenticated copy thereof, is ready in court to be produced, and an uncertified copy thereof is hereto attached marked "Exhibit A" and made a part hereof as though fully set forth herein.

That prior to the issuance of said letters patent, all proceedings were duly had and taken, that were required by law to be had or taken prior to the issuance of letters patent for new and useful inventions.

That by virtue of the premises the plaintiff, Henry W. Bassett, is now, and during all the times hereinafter mentioned, was the sole and exclusive owner of the invention set forth and claimed in

and described by said letters patent, and of all the rights and privileges granted and secured thereby, or intended to be granted and secured thereby.

Yet, notwithstanding the premises, the Erickson Construction Company, defendant herein, having full knowledge thereof, and in violation of the exclusive rights and privileges secured to the plaintiff, Henry W. Bassett, by said letters patent, and utterly disregarding the same, and contriving to injure and damage plaintiff and his said rights since the date of plaintiff's said letters patent, and within six years of the date hereof, to-wit, on the 25th day of April, A. D. 1911, and thence continuously from day to day, unto the day of the filing of this declaration, without the license or consent or allowance, and against the will of the plaintiff, and in violation of his rights, and without any licence or authority whatsoever, in the city of Seattle, said State of Washington, and Western District and Northern Division thereof, did wrongfully and in defiance of the rights of the said plaintiff, make and use, and is now making and using forms for molded conduits, containing constructions which are either identical with, or mechanical equivalents of the constructions in material parts thereof, substantially the same in construction and operation and fully embracing and containing the invention described, claimed and patented in and by said letters patent aforesaid, particularly of claims 1, 5 and 6.

That the forms for moulded conduits made and used by the said defendant were, and are, and each

of them is and was an infringement upon said letters patent No. 990417, and were made and used, and are being made and used, according to the specifications thereof, all contrary to the law and the Statutes of the United States in that behalf made and provided.

That notwithstanding that the said plaintiff, Henry W. Bassett, made and used said patented invention for his own exclusive use and benefit, and did not manufacture the same for sale, nevertheless, plaintiff caused notice to be given to the said defendant of his right and its infringement, and alleges that said defendant had full knowledge and notice of all the rights of the plaintiff in the premises.

V.

And the plaintiff further alleges and avers, that on account of said acts of the defendant herein set forth, and by reason of the premises and the infringement aforesaid, the plaintiff has been greatly injured and damaged, and deprived of great profits which he might and otherwise would have derived from said invention and letters patent, and that he has sustained actual damages thereby in the sum of Thirty Thousand Dollars, and that by force of the statutes aforesaid, an action has accrued to him, the plaintiff herein, to recover the said actual damages as the court may see fit to order and adjudge.

WHEREFORE plaintiff prays for and demands judgment against the said defendant for the sum of Thirty Thousand Dollars, actual damages, together

with such further sum, not exceeding in the aggregate three times the amount of such actual damages, as the Court may adjudge, and for costs of suit.

HENRY W. BASSETT,
Plaintiff.

FRED W. DRICKEN,

RICHARD J. COOK,
Plaintiff's Attorneys.

The United States of America, Western District of Washington, Northern Division, County of King, State of Washington.—ss.

Henry W. Bassett, being first duly sworn, deposes and says, that he is the plaintiff in the foregoing entitled action, that he has read the Declaration and knows the contents thereof, and that he believes the same to be true.

HENRY W. BASSETT.

Subscribed and sworn to before me this 23rd day of November, A. D. 1911.

FRED W. DRICKEN,
Notary Public in and for the State of Washington, residing at Seattle.

(Seal)

(Endorsed) Filed in the U. S. Circuit Court, Western District of Washington, Nov. 24, 1911.

JAMES C. DRAKE, Clerk,
B. O. WRIGHT, Deputy.

United States Circuit Court for the Western District of Washington.

No. 2059

HENRY W. BASSETT,

Plaintiff,

vs.

THE ERICKSON CONSTRUCTION COMPANY, a corporation,

Defendant.

PRAECIPE.

To the Clerk of the above entitled Court:

You will please issue Summons to above named defendant The Erickson Construction Company, a corporation.

FRED W. DRICKEN,
RICHARD J. COOK,

Attys.

Filed U. S. Circuit Court, Western District of Washington, Nov. 24, 1911. James C. Drake, Clerk; B. O. Wright, Deputy.

In the Circuit Court of the United States for the Western District of Washington, Northern Division.

No. 2059

HENRY W. BASSETT,

Complainant,

v.

THE ERICKSON CONSTRUCTION COMPANY, a corporation,

Defendant.

ANSWER OF THE DEFENDANT, THE
ERICKSON CONSTRUCTION COMPANY
TO THE BILL OF COMPLAINT
HEREIN.

This defendant now and at all times saving and reserving unto itself all benefit and advantage of exception which can or may be had or taken to the errors or uncertainties or other imperfections in said bill of complaint contained, for answer thereto, or unto so much of such parts thereof as said defendant is advised is or are material for it to answer unto, says as follows:

I.

It denies upon information and belief that the said Henry W. Bassett was the true, original or first inventor of any new or useful invention in Forms for Moulded Conduits as alleged in said bill; says that it is not true that said alleged invention was not known or used in this country and not patented or described in any printed publication of this or foreign countries before his alleged invention thereof, or that the same had not at the time of his application for a patent therefor been in public use or on sale for more than two years.

II.

It is not informed, except by said bill of complaint, whether letters patent for said alleged invention in due form of law were issued to the said Henry W. Bassett, or whether said alleged letters patent were under the seal of the Patent Office of

the United States, or were signed by the secretary of the interior or countersigned by the commissioner of patents, and leaves the complainant to make such proof thereof as he may; and denies that the said letters patent granted to the said Henry W. Bassett, his heirs or assigns, for the term of seventeen years, or for any term, the exclusive or any other right to make, use or vend the said alleged invention throughout the United States or territories thereof, or any right whatsoever.

III.

It denies that at the time alleged in said bill of complaint or at any time it did make, use or vend the Forms for Moulded Conduits containing and embodying the invention set forth and covered by said letters patent sued upon, or that it in any way infringed upon the exclusive rights, or any rights, of the complainant, or intended so to do; denies that it has derived or realized any profits which complainant would have derived from his alleged exclusive rights, and denies that complainant is deprived of any royalties, or has incurred any damages by any unlawful or wrongful acts of this defendant.

IV.

It says upon information and belief that the said Henry W. Bassett was not the original and first inventor or discoverer of the invention purporting to be covered by the said letters patent, or any material or substantial parts thereof, and that the same, or material or substantial parts thereof, had

been in public use and on sale in this country prior to said alleged invention, and for more than two years before the application for said letters patent; and further, that the same had been described and illustrated in printed publications and patents prior to the date of the supposed invention of the said Henry W. Bassett.

This defendant specifies instances of such prior use and publication as follows, to-wit:

No.	To Whom Granted	Date
628,382	Barnett	July 14, 1899
837,328	Morris	December 4, 1906
870,269	Boswell	November 5, 1907
910,046	Dooley	January 19, 1910
209,976	Naas	November 19, 1878
826,057	DePaolis	July 17, 1906
915,698	Putz	March 16, 1909
807,935	Jackson	December 19, 1905
168,755	Leoon, et al.	October 11, 1875
806,040	Reno	March 27, 1906
783,575	Gustafson	February 28, 1905
521,767	McNamara	June 19, 1894
249,397	Rader	November 8, 1881
77,285	Holske	April 28, 1868
236,840	Perry	January 18, 1881
838,354	Rader	December 11, 1906
852,891	Moir	May 7, 1907
762,655	Reno	June 14, 1904
723,307	Reno	March 24, 1903
473,490	Babcock	April 26, 1892

578,891	Moon	March 16, 1897
947,773	Dolan	January 25, 1910
963,544	Graef	July 5, 1910
545,988	Ransome	September 10, 1895
983,046	Graef	January 31, 1911
140,498	Groves	July 1, 1873
918,723	Alt	April 20, 1909
894,549	Tufts	July 28, 1908
966,044	Nichols	August 2, 1910
752,249	Nickerson	February 16, 1904
870,269	Boswell	November 5, 1907

And to others whose names and places of residence this defendant craves leave to furnish hereafter.

V.

It says upon information and belief that the letters patent sued upon are invalid for want of patentable invention.

VI.

It says upon information and belief that the alleged invention had been abandoned to the public prior to Henry W. Bassett's application for a patent therefor.

VII.

It denies that the said invention so patented by the said Henry W. Bassett is of great or any utility and value, and that the same has been introduced into public use, or that the public generally, or any portion thereof have acquiesced in and acknowledged the complainant's exclusive right to the same or any portion thereof; it is informed and believes that while the application for said letters patent in

said bill of complaint mentioned was pending in the Patent Office of the United States the applicant for the patent, the said Henry W. Bassett, so limited and confined the claims in said patent under the requirements of the commissioner of patents that he cannot now seek for or obtain a construction for such claim sufficiently broad to cover the construction used by this defendant.

VIII.

It says upon information and belief that the Forms for Moulded Conduits used by it at the time this suit was brought and at all times prior thereto and at this time was a form for moulded conduits in common use in the city of Seattle and elsewhere long prior to the date when the said Bassett applied for his letters patent; that the said Henry W. Bassett made his original application describing in his specifications therefor the form of moulded conduits in exact matter and substance covering in detail the form of moulded conduits now used and at all times heretofore used by this defendant, and that his application therefor was denied in toto by the honorable commissioner of patents, and that thereafter the said Henry W. Bassett on several occasions amended his specifications and claims and finally procured letters patent limited to a certain construction comprising upper and lower series of longitudinal segments adapted to outline the conduit, the said segments being surrounded by a restraining band supporting said segments with the lower series of the latter enough further from the

center than the adjoining segments of the upper series, to permit the edges of the said adjoining upper segments moving peripherally within the segments of the lower or invert series, together with means for affecting the peripheral expansion of the upper series of segments; and also a specific form of segment by which interlocking action between adjacent sections is obtained, which constructions are not embodied in the form for moulded conduits now being or heretofore used by this defendant.

IX.

It denies that the complainant has been damaged in the sum of thirty thousand dollars, or any other sum or sums whatsoever.

X.

It denies that the complainant had any rights in any Forms for Moulded Conduits used by the defendant.

XI.

It denies upon information and belief that the complainant has such title in said letters patent as to enable him to maintain this suit.

WHEREFORE this defendant having fully answered to the said bill of complaint in so far as it is advised the same is material and necessary to be answered unto, denies that the said complainant is entitled to the relief or any part thereof in the said bill of complaint demanded, or any relief whatsoever; prays the same advantage of its aforesaid answer as if it had pleaded and demurred to said

bill of complaint, and prays to be hence dismissed with its reasonable charges in this behalf most wrongfully sustained.

SHANK & SMITH,

Solicitors for Defendant.

United States of America
District of Washington
Northern Division—ss.

C. J. ERICKSON being first duly sworn on oath deposes and says: That he is president of the defendant company and makes this affidavit in verification of the foregoing answer for and on behalf of the defendant; that he has read the foregoing answer, knows the contents thereof and believes the same to be true.

C. J. ERICKSON.

Subscribed and sworn to before me
this 27th day of December, 1911.

CORWIN S. SHANK,

(Seal)

Notary Public in and for the State of Washington, residing at Seattle.

(Endorsed): Filed in the U. S. District Court, Western District of Washington, Jan. 3, 1912. A. W. Engle, Clerk. B. O. Wright, Deputy.

Service admitted 28th day of December, 1911.
Fred W. Dricken, R. J. Cook, Attorneys for Complainant.

*In the District Court of the United States in and
for the Western District of Washington, North-
ern Division.*

No. 2059

HENRY W. BASSETT,

Plaintiff,

vs.

THE ERICKSON CONSTRUCTION COM-
PANY, a corporation,

Defendant.

REPLY

The plaintiff replies to the answer of the defend-
ant:

Each and every allegation herein contained
That he denies ^I ~~the same and the whole thereof,~~
and of this the plaintiff puts himself upon the
country.

RICHARD J. COOK,

FRED W. DRICKEN,

Attorneys for Plaintiff.

United States of America

District of Washington,

State of Washington,

County of King.—ss.

Fred W. Dricken being first duly sworn deposes
and says that he is one of the attorneys for the
plaintiff; that he has read the foregoing reply and
knows the contents thereof and believes the same
to be true; that he makes this verification and affi-

davit for and on behalf of the plaintiff for the reason that said plaintiff is not within said district, state or county.

FRED W. DRICKEN,

Subscribed and sworn to before me this 24th day of January, 1912.

(Seal)

R. E. HILBERT,

Notary Public in and for the State of Washington, residing at Seatlte.

Service of Reply admitted, January, 1912, Corwin S. Shank, Attorney for Defendant.

(Endorsed): Filed in the U. S. District Court, Western District of Washington, Feb. 2, 1912. O. W. Engle, Clerk. By S., Deputy.

In the United States District Court for the Western District of Washington.

No. 2059

HENRY W. BASSETT,

Complainant,

vs.

ERICKSON CONSTRUCTION COMPANY,

Defendant.

MOTION FOR DISMISSAL.

Comes now the defendant herein and moves the court upon the record herein that the above entitled cause be dismissed for the reason and upon the ground that the said cause has been at issue more

than ninety days, and the said complainant has taken no testimony therein and has not obtained any extension of time to take testimony therein, and has not obtained permission to have final hearing of the case upon oral testimony.

SHANK & SMITH,

Solicitors for defendant.

(Endorsed): Filed in U. S. District Court, Western District of Washington, June 7, 1912. A. W. Engle, By S., Deputy.

Service admitted, 7 day of June, 1912, R. J. Cook, Atty. for Plaintiff.

*In the District Court of the United States, Western
District of Washington, Northern Division.*

No. 2059

HENRY W. BASSETT,

Plaintiff,

vs.

THE ERICKSON CONSTRUCTION COM-
PANY, a corporation,

Defendant.

NOTICE.

To the above named Plaintiff and to Fred W. Dricken and Richard J. Cook, his Attorneys:

You are hereby notified that the defendant will call up for hearing and disposition the attached

motion at the incoming of court on the morning of Wednesday, June 12, 1912, or as soon thereafter as said matter can be heard.

SHANK & SMITH,
Attorneys for defendant.

In the District Court of the United States, Western District of Washington, Northern Division.

No. 2059

HENRY W. BASSETT,
Plaintiff,

vs.

THE ERICKSON CONSTRUCTION COMPANY, a corporation,
Defendant.

MOTION FOR CONTINUANCE.

Comes now the defendant herein by its attorneys Shank & Smith and moves the court for an order striking from the trial calendar and for a continuance for the term of the above entitled cause.

This motion is based upon the files and the records herein and upon the affidavits of Corwin S. Shank and C. J. Erickson hereto attached.

SHANK & SMITH,
Attorneys for defendant.

In the District Court of the United States, Western District of Washington, Northern Division.

No. 2059

HENRY W. BASSETT,

Plaintiff,

vs.

THE ERICKSON CONSTRUCTION COMPANY, a corporation,

Defendant.

AFFIDAVIT OF CORWIN S. SHANK.

United States of America

District of Washington

Northern Division—ss.

CORWIN S. SHANK, being first duly sworn on oath deposes and says: That he is one of the attorneys for the defendant herein and has had particular charge of the defense. The complaint and subpoena included were served upon the defendant shortly after the same were issued on November 24, 1911; the subpoena commanded the defendant to appear before January 1, 1912, and answer the complaint. The subpoena also designated Fred W. Dricken and Richard J. Cook as solicitors for complainant. I prepared an answer in form required in equity practice; the same was served on plaintiff January 3, 1912. The case was filed on the equity side of the court and docketed in the equity docket. No other process than the subpoena in equity was ever served upon the defendant, and inasmuch as the case had been so docketed and pro-

cess in equity had issued out of the case, I assumed that the case would proceed in equity and follow the usual forms of practice therein.

Immediately after the case was brought I began to collect the evidence on behalf of the defendant, which involved examining the records in the patent office and to this end a competent man was sent to Washington City for this purpose. In addition to looking up the patent records upon matters bearing upon the issues, it became necessary also to investigate and ascertain what has been used in other large contracting works by way of forms for moulded conduits, and have learned from
....., a competent and skillful engineer in Boston, that forms for moulded conduits exactly like those that the plaintiff claims to have been patented by him have been in public use in the city of Boston since 1904. That.....
.....is a necessary witness in the above entitled cause, and will testify to the above fact and he is now in the city of Boston or thereabouts, and his deposition will have to be taken. That I relied upon the form of procedure in this action being determined by the subpoena in equity and that the testimony would have to be taken pursuant to the rules in equity. It will be impossible to get said, who is a material witness at the trial of this case.

I further state that R. H. Thomson, formerly city engineer of the city of Seattle, is a material witness in this case, and I am unable to have him present

at the trial of this case now. Mr. Thomson was city engineer of the city of Seattle at the time the plaintiff claims to have discovered his so-called new and useful improvement in forms for moulded conduits, and for many years prior thereto and it was during the administration of Mr. Thomson that the defendant did all of its work for the city of Seattle on which it is claimed by the plaintiff that the plaintiff's patented invention was used. Mr. Thomson is now engaged as an engineer for the government in British Columbia in carrying on a large engineering enterprise, and I have used all reasonable means in getting in touch with him, but find that he is probably some where on Vancouver Island about one hundred miles from Victoria, and I am unable to state whether it would be possible to get him here or not, but under all the circumstances as I find them I do not believe he can possibly come, and it will therefore be necessary to take his deposition. Mr. Thomson will testify as to the development of these improvements and will give a detailed description of the different mechanical devices that were used by the defendant as well as a definite description of the way in which these improvements were developed from time to time. I am informed and believe that Mr. Thomson will testify that the forms for moulded conduits used by the defendant, the use of which it is claimed by the plaintiff is an infringement of his patents, are different from the plaintiff's patents, and that the forms used by the defendant are in fact forms that

have been in use in the city of Seattle for more than two years prior to the commencement of this action. Mr. Thomson is a very material witness to the defense of this action.

After an investigation of all the facts in this case, I have advised the defendant that it cannot safely go to trial without the testimony of
.....and of R. H. Thomson, and the former's testimony will have to be taken by deposition, while the latter may be able to attend by having the case set sufficiently in advance to enable him to arrange his plans accordingly, but if he cannot then his testimony likewise must be taken by deposition.

I further state that in my judgment if this case is to proceed as an action at law, that the defendant should be permitted in order to conform to an orderly procedure to withdraw the answer herein and file an amended answer and set up such affirmative defenses as will protect the defendant's rights.

And further affiant saith not.

CORWIN S. SHANK.

Subscribed and sworn to before me this 11th day of June, 1912.

(Seal)

H. C. BELT,

Notary Public in and for the State of
Washington, residing at Seattle.

*In the District Court of the United States, Western
District of Washington, Northern Division.*

No.

HENRY W. BASSETT,

Plaintiff,

vs.

THE ERICKSON CONSTRUCTION COM-
PANY, a corporation,

Defendant.

AFFIDAVIT OF C. J. ERICKSON.

United States of America
District of Washington
Northern Division—ss.

C. J. ERICKSON, being first duly sworn on oath deposes and says: I am the president of the Erickson Construction Company the defendant herein. I am informed by my counsel that it has a good defense at law to the above entitled action. For many years last past R. H. Thomson has been city engineer of the city of Seattle, serving in that capacity at the times when it is claimed by the plaintiff that the defendant infringed his patent by using certain forms for moulded conduits. I am informed and believe that Mr. Thomson will testify in this action as to the development of the forms for moulded conduits which have been used in the city of Seattle, and give a detailed description of the manner in which the same were developed and under whose contracts different improvements were made. I am also informed that he will testify that the forms

used by the defendant were not like those covered by the patents of the plaintiff, but that the forms for moulded conduits used by the defendant were different, and that he will give the details thereof, describing wherein these differences exist.

I am also informed that
of Boston, a competent engineer, will testify that forms for moulded conduits like those for which the plaintiff has claimed a patent have been in public use in the city of Boston and vicinity since 1904, and that he will likewise in addition to this give valuable information as to the manner in which improvements have been made from time to time in forms for moulded conduits.

These two witnesses are very important and I cannot go to trial as I am informed by my attorneys safely without their presence.

And further affiant saith not.

C. J. ERICKSON.

Subscribed and sworn to before me this 11th day of June, 1912.

H. C. BELT,

Notary Public in and for the State of
Washington, residing at Seattle. (Seal)

Service admitted, 11th day of June, 1912. R. J.
Cook, Attorney for Plaintiff.

(Endorsed): Filed in the U. S. District Court,
Western District of Washington, June 12, 1912. A.
W. Engle, Clerk. S., Deputy.

In the District Court of the United States, Western District of Washington, Northern Division.

HENRY W. BASSETT,

Plaintiff,

vs.

THE ERICKSON CONSTRUCTION COMPANY, a corporation,

Defendant.

AFFIDAVIT.

The United States of America,
Western District of Washington,
Northern Division,
County of King,
State of Washington,—ss.

RICHARD J. COOK, being duly sworn, says that he is one of the plaintiff's attorneys and makes this affidavit in opposition to the affidavits filed on the motion of the defendant for continuance; that the complaint or declaration is obviously in an action at law and not in equity and was filed on the law side of the court with a precept for the issue of a summons to be served by the marshal on the defendant; that the declaration was filed on Nov. 24, 1911, and was served on the defendant on Nov. 25, 1911, and the defendant filed and served his answer on December 27, 1911; that before beginning this action the plaintiff had brought a suit as complainant in equity in this court against the Colson Construction Company and others as defendants for an injunction and accounting of profits based on their infringe-

ment of the same patent in suit herein; that the defendant's answer herein is obviously a copy of the answer filed in the Colson case, as it follows it almost literally and sets up precisely the same defenses, thus showing that the counsel for the defendant in this action and in said suit were co-operating and had consulted together; that by reason of all said facts and circumstances and of the form of the declaration herein it is evident that the counsel for the defendant herein were fully charged with ample notice as early as in November, 1911, that this is an action at law and not a suit in equity and that they should expect to defend the action in a trial before the court and a jury, according to the regular forms of procedure in this court; that after the answer was served and on or about January 24, 1912, the affiant served on the defendant's attorneys a reply to their answer in due form as a reply at law and not as a replication in equity; that by a comparison of the body of the complaint with the subpoena served by the marshal it should have been obvious to counsel for the defense that there was a discrepancy between them, and since the form of the complaint determines the mode of trial, said counsel, if desirous to take any advantage of the discrepancy, should have moved before answering to quash the subpoena upon the ground that it was improper process in an action at law; that if the defendant's counsel were laboring under a misapprehension as to the side of the court on which this cause is brought, their proper course would have been to move to dis-

miss the cause on the expiration of three (3) months after it was at issue instead of allowing it to stand without any such motion until on the 7th day of June, 1912, when objection was made to the trial of the cause before the jury on said ground; that the cause having been at issue properly for trial in the jury calendar, it was duly placed by the clerk on the jury list and was set by the court for trial on June 7, 1912, when the calendar for the May term 1912 was made up, and said calendar was printed and issued to all members of the bar interested therein at a date earlier than May 7, 1912.

Referring to the statements in the affidavit on the motion for continuance, the plaintiff admits "that the forms used by the defendant are in fact forms that have been in use in the city of Seattle for more than two years prior to the commencement of this action"; and the plaintiff is willing to stipulate said fact in due form and with the same effect as if it were testified to by R. H. Thompson as a witness for the defense. The affiant is informed and believes that besides Mr. Thomson, C. J. Erickson, President of the defendant, and sundry persons now or recently in its employ, are fully informed as to the forms and devices used by the defendant and can give as full testimony about the same as Mr. Thomson could.

The plaintiff also now offers to permit the defendant to file and serve an answer drawn in proper form as an answer in an action at law, setting up precisely the same defenses to this action which were set up, or attempted to be set up, by its answer on file herein,

and the plaintiff will go to trial thereon the same as if such answer had been duly served at the proper time, or in lieu of such new answer the plaintiff offers to waive any objection to its form and to treat it as if it were drawn in proper form as an answer at law alleging the same defenses and to the same extent as at present.

As to the alleged prior use in Boston, the affiant says that it is evident that no diligence has been used to get the deposition of the Boston witness; that the affidavit for continuance was served yesterday afternoon with the name of the Boston witness in blank, and the affiant was informed that the name would be supplied this morning; that affiant is informed and believes that the defendant's counsel have not been in communication with said Boston witness, but have obtained his name from Kerr & McCord, Esqs., solicitors of the defendants in said suit against the Colson Construction Co. who intend to take his deposition in said suit.

The plaintiff has been at heavy expense for fees of counsel and experts in preparing for the trial at this term, and at much personal inconvenience and expense has left his business in British Columbia and come to Seattle to attend upon the court at this term. He has been ready for trial on and ever since the 7th day of the current month, and has had several witnesses including two expensive experts, under subpoena from day to day. He has been solicited by several persons whose business makes it desirable to use the plaintiff's patented forms, for licenses or other

contracts under said patent, and he is very anxious to have a judicial determination of the validity of his patent, that he may know what his rights are; and a continuance of the trial to another term will result in very serious harm and disadvantage to him.

RICHARD J. COOK.

Subscribed and sworn to before me, this 12th day of June, 1912.

JOHN E. BURKHEIMER,

Notary Public in and for the State of Washington, residing at Seattle. (Seal)

(Endorsed): Filed in U. S. District Court, Western District of Washington, June 12, 1912. A. W. Engle, Clerk. S., Deputy.

~~Filed in U. S. Court, Western Dist. of Wash., June 28, 1913. Frank L. Crosby, Clk. E. M. Lakin, Deputy.~~

*In the United States District Court for the Western
District of Washington, Northern Division.*

No. 2059

HENRY W. BASSETT,

Plaintiff,

vs.

THE ERICKSON CONSTRUCTION COMPANY, a corporation,

Defendant.

BILL OF EXCEPTIONS.

BE IT REMEMBERED that heretofore and on to-wit: January 15, 1913, the above entitled cause

came regularly on for trial in the above court, and before the Honorable Clinton W. Howard, Judge of said Court, sitting with a jury;

The plaintiff appearing by Charles E. Shepard, Esq., of Messrs. Shepard & Burkeimer and Richard J. Cook, Esq., his attorneys and counsel:

The defendant appearing by Corwin S. Shank, Esq., and James A. Kerr, Esq., of Messrs. Kerr & McCord, its attorneys and counsel:

A jury having been fully empaneled and sworn to try the cause, and counsel for plaintiff having made their opening statement to the jury, counsel for defendant reserving their opening statement, thereupon the following proceedings were had and done, to-wit:

Henry W. Bassett, the plaintiff being duly sworn, on oath testified that he was the plaintiff in the action and patentee named in the Letters Patent.

MR. SHEPHERE: We offer in evidence a certified copy of the letters patent.

(Paper handed to counsel for defendant)

THE COURT: It may be admitted, and marked plaintiff's Exhibit "1".

No. 990417

THE UNITED STATES OF AMERICA

To All to Whom These Presents Shall Come:

Whereas Henry W. Bassett, of Seattle, Washington, has presented to the Commissioner of Patents a petition praying for the grant of Letters

Patent for an alleged new and useful improvement in Forms for Molded Conduits, a description of which invention is contained in the specification of which a copy is hereunto annexed and made a part hereof, and has complied with the various requirements of law in such cases made and provided, and

Whereas upon due examination made the said claimant is adjudged to be justly entitled to a patent under the law.

Now therefore these Letters Patent are to grant unto the said Henry W. Bassett, his heirs or assigns, for the term of seventeen years from the twenty-fifth day of April, one thousand nine hundred and eleven, the exclusive right to make, use and vend the said invention throughout the United States and the territories thereof.

In testimony whereof I have hereunto set my hand and caused the seal of the Patent Office to be affixed at the City of Washington this twenty-fifth day of April, in the year of our Lord one thousand nine hundred and eleven, and of the Independence of the United States of America the one hundred and thirty-fifth.

(Seal)

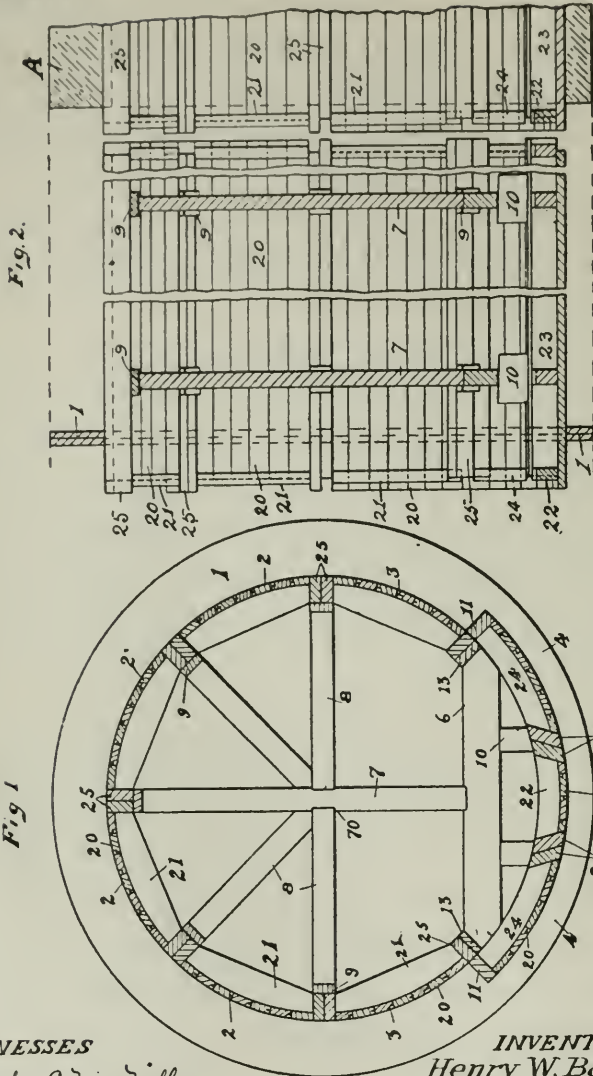
C. C. BILLINGS,

Acting Commissioner of Patents.

H. W. BASSETT.
FORM FOR MOLDED CONDUITS.
APPLICATION FILED MAR. 10, 1910.

990,417.

Patented Apr. 25, 1911.



WITNESSES

Gordon E. Mac Millan
J. A. Whitmore

INVENTOR
Henry W. Bassett.

BY
Henry L. Reynolds,
ATTORNEY.

UNITED STATES PATENT OFFICE.

Henry W. Bassett, of Seattle, Washington.

Form for Molded Conduits.

Specification of Letters Patent.

Application filed March 18, 1910. Serial No. 550,247.
990,417.

Patented Apr. 25, 1911.

To all whom it may concern:

Be it known that I, Henry W. Bassett, a citizen of the United States, and resident of the city of Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Forms for Molded Conduits, of which the following is a specification.

My invention relates to an improvement in forms for molded conduits, and comprises the novel parts and combinations of parts which will be hereinafter described and particularly described in the claims.

The object of my invention is to provide a form or mold which may be used to shape the inner surfaces of conduits which are made of such materials as cement, concrete, etc., which may be molded to forms and then allowed to set, the specific objects being to improve and simplify both the construction and method of using such devices so as to make them more convenient and economical, as well as better.

In the drawings I have shown my invention in a form which is preferred by me.

Figure 1 is a cross section of a complete mold in position for use. Fig. 2 is a longitudinal section showing a new section slightly separated from the

previous section which has been completed and the conduit molded.

My invention is more particularly applicable to molding conduits of some size and under conditions where the conduit is accessible from the top, for instance in making a sewer or other pipe in an open cut. For the best use of my device the size of the conduit should be such as to permit passage of workmen therethrough, so as to remove the inner lining and to set up the new sections.

The particular form of mold shown is designed to make a sewer conduit which, when fully completed, is to have a segment at the bottom lined with vitrified brick, and therefore, the molded section thereof shows a recessed segment of a depth to receive a layer of brick.

The outline of the conduit which I have shown to illustrate my invention, is circular, although it will be understood that it may be modified so as to be used to mold conduits of other transverse outline.

In Fig. 2 will be seen, at the right, the end, A, of the body of a section of conduit which has just been molded. The material which will be assumed to have been used is concrete, although any other material may be used which is of similar character, in respect at least, as to its adaptability to being molded to shape. In fact, some of the features of my invention may be used with advantage in building conduits out of brick or like materials of block form which are laid up as masonry.

The forms which outline the inner surface of the conduit consist of a series of segments, 2, 3, 4 and 5, each segment consisting of an outer skin 20 composed of boards, longitudinal ribs, 25, and transverse ribs, 21. The sections 2 and 3 are alike in construction, but differ in the manner in which they are placed when in use.

Two sections 4 and one section 5, are used in forming the part which is to receive the brick lining. The outer sections 4 have their outer edges radial, but their inner edges, as outlined by the longitudinal ribs 23, are sloping from a radius, the angle of inclination being such as to make the outer angle at this edge considerably less than a right angle. The material point is that the opposing surfaces of the segments 4 be somewhat farther apart at their upper edges than at their lower edges. The central section 5, has its side ribs 23, similarly inclined so that this segment acts as an inverted keystone, or one which may be removed from the concave side of the arch.

The various segments which outline the form are held in place at one end by engagement with the segments which have been used in molding the last section of the conduits, and at the other end they are held in place by a ring or templet 1, which is in the form of a ring or flange extending radially and about the whole. This ring acts as a restraining member to keep the segments in place when forced outward, and also to determine

their exact position. It also acts as a wall to determine the end surface of the section being molded.

In setting the form up for a new section of conduit, the ring 1 is accurately placed, then the lower segments 4 and 5 are put in place. Transverse beams or sills 6, are placed upon the transverse ribs 24, of the outer segments 4. The segments 3, 3, are placed in position and then the upper segments 2, these being held in place by placing the interior bracing consisting of the central vertical posts 7, and the radial bars 8, which extend from the center of the conduit outward, one at each point of juncture between the segments 2 and 3.

The central posts 7 are preferably cut so as to form recesses 70, on two opposite sides, adapted to receive the ends of the horizontal bars 8 and support their inner ends. The other short bars 8 rest upon the horizontal bars and between these horizontal bars and the vertical post 7. The central post 7 rests upon the transverse sill 6. The sill 6 is cut inclined at its ends, one side to fit the transverse ribs 24 of the segments 4, and the other side radially to fit the edge of the segments 3.

The position of the segments 3 and 4 is such that the segments 4 are wholly outside of, that is, farther from the center, than the segments 3, so that the segments 3 may, under certain conditions, slide over or overlap the segments 4. This occurs when first setting up the segments 2 and 3. Also the post 7 and bars 8 are cut somewhat shorter than is needed to hold the segments out against the ring or templet 1.

After the segments 2 and 3 have been put in position, wedges 13 are driven between the ends of the sills 6 and the edges of the segments 3, expanding the segments outward against the ring 1. At the same time wedges 9 are driven between the bars 8 and the ribs 25 to force the segments outward against the ring 1, thus holding the whole structure firmly in exact position. Blocks 10 are also placed between the sills 6 and the lower or invert segments 4 and 5, thus holding these securely in exact position.

The restraining member or ring 1, where it is desired to form a conduit with a lining recess, has its inner outline offset at the margins of the lined section, as at the points 11, this offset being of the depth of the lining to be inserted. The segments 4 and 5 which form this lined section, or the invert as herein shown, are made to fit closely against this offset, the inner segment 5 being shaped as a key-stone insertible and removable from the interior. The depth of this offset is that of the thickness of the lining to be inserted.

An inspection of Fig. 2 will show that the outer skin or lagging of the segments projects beyond the transverse ribs 21, 22 and 24, at one end of the segments, and that the transverse ribs project beyond the outer skin or lagging at the other end of the segments. These segments are so placed that when set up, the ends of the segments forming the new section will overlap those of the section just completed, in such a way as to resist displacement while setting up and while placing the material of

the wall, at least until the interior bracing has been placed. In some cases the outer skin of the segments of the new section will be outside the transverse ribs of the segments of the preceding section, and in some cases this condition will be reversed. Also, the ends of the longitudinal ribs project half the thickness of the transverse ribs at one end and terminate at the center line of the transverse ribs at the other end, whereby the ends of the segments of adjoining sections interlock to secure exact registry and to prevent peripheral displacement. The segments of the completed section of conduit thus support and exactly locate the segments which are set up for the molding of a new section. The other ends of the segments are located and held by the encircling band or restraining member 1, which forms the end wall of the space to be filled with the conduit material.

After a conduit section has been molded, the bars 7 and 8 and the wedges used between these bars and the segments to key the latter out against the ring 1 are removed and used to set up another section. The encircling ring 1 is also moved ahead the length of a section and used to locate and hold the segments for the next section. The segments themselves are left within the conduit a sufficient length of time to permit the conduit walls to set sufficiently, and are then taken down and removed. This method of forming the mold and using it, secures rapid and accurate work and also cheapness both in the construction of the molds and in their

operation. After the concrete has been set sufficiently to warrant removal of the segments of the mold, these may be removed and the lining to be given in the invert may be put in place as soon as convenient. This part of the work may be done in this way much more cheaply than by incorporating it in the wall at the time the concrete is set.

What I claim and desire to patent is:

1. An inner form for molded conduits comprising longitudinal segments adapted to outline the invert, other longitudinal segments adapted to outline the remainder of the conduit, a restraining band adapted to surround and locate said segments and having its inner edge recessed to hold the invert segments enough farther from the center than the segments adjoining to permit the edges of the latter moving peripherally within the invert segments, and means for peripherally expanding those segments above the invert.

2. An inner form for molded conduits comprising a series of segments adapted to be assembled to act as an arch and outline the bore of the conduit, the segments of adjacent sections having complementary projections and recesses adapted to interlock to prevent displacement both radially and peripherally, a templet or rib adapted to surround the outer ends of the segments of a section to restrain them against outward movement, and also to form an end wall for the mold.

3. An inner form for molded conduits, comprising a series of longitudinal segments adapted, when

assembled, to outline the bore of the conduit, the ends of said segments having complementary projections and recesses formed by the relative positions of their outer skin and ribs, and adapted to engage to prevent displacement of the segments of adjacent sections both in a radial and peripheral direction, a templet or partition surrounding the outer ends of the segments of the section and having its opening conforming to that of the bore of the conduit, said templet serving as a restraining band to prevent outward movement of the segments, and also to form a partition wall for the outer end of the wall section being molded, and braces adapted to engage the inner surface of the segments to hold them out against said templet.

4. An inner form for molded conduits comprising segments adapted to be assembled to act as an arch, said segments having longitudinal and transverse ribs, and an outer skin, the transverse ribs at the ends of the segments being offset relative to the outer skin to interlock against displacement radially at the junction of adjacent sections, and the ends of the longitudinal ribs being offset relative to the transverse ribs to interlock to prevent displacement peripherally between adjacent sections.

5. An inner form for molded conduits, comprising longitudinal segments composed of outer lagging and ribs secured thereto, said ribs including transverse ribs at each end, the transverse rib at one end projecting beyond the ends of the lagging and at the other end the lagging extending beyond the rib,

whereby interlocking engagement between segments may be obtained, said segments also having longitudinal ribs at their side edges adapted to engage those of adjacent segments to form an arch, an independent, radially extending rib surrounding the outer ends of the segments and acting as a restraining band and a temporary end wall for the mold section, and means for expanding the segments peripherally against this band.

6. An inner form for molded conduits, comprising segments adapted to outline the invert, one of said segments being removable inwardly, another set of segments adapted to outline the remainder of the conduit, a restraining member surrounding the segments and having an off-set outline at the edges of the invert section, whereby the adjacent segments may slide one over the other, transverse sills spanning the invert segments and serving as an abutment for the other segments, and means for keying the segments outwardly from said sills against the restraining member.

7. An inner form for molded conduits, comprising segments adapted to outline the invert, one of said segments being removable inwardly, another set of segments adapted to outline that portion of the conduit above the invert, a restraining member surrounding the segments and having an off-set outline at the edges of the invert section, whereby the segments at each side may slide, one over the other, transverse sills spanning the invert segments and serving as abutments for the upper segments,

means for keying said upper segments outward from said sills, and posts braced against each other and the segments at their meeting edges to hold them more securely against the restraining member.

In testimony whereof I have hereunto affixed my signature at Seattle, Washington, March, 1910.

HENRY W. BASSETT.

Witnesses:

HENRY L. REYNOLDS,

GORDON E. MacMILLAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

Q Mr. Bassett, are you now the sole owner of this patent?

A Yes sir.

Q And you have been at all times since the patent was granted?

A Yes sir.

Q And since it was applied for?

A What do you know as to the use of this patent by the defendant, the Erickson Construction Company?

A They have been using the form continuously I believe ever since some time in 1911 or before;

Q Did you ever have any communications with the Erickson Construction Company or any of its officers or agents respecting their use of your invention?

A Yes sir; I wrote them a letter; I also saw them personally.

MR. SHANK: You have a copy of it?

MR. SHEPARD: Yes.

MR. SHANK: I have no objection to the copy being used in evidence if you let me see the copy please.

Q Did you ever cause any attorney or agent of yours to write a letter to the Erickson Construction Company on the subject?

A Yes sir, I did.

Q Who was it?

A Mr. Reynolds.

(Paper handed to Mr. Shank)

MR. SHANK: No objections to that being used as if it were the original.

MR. SHEPARD: Have you the original?

MR. SHANK: I have the original here, yes. Do you want the original?

MR. SHEPARD: I prefer that, yes. This is a carbon copy.

The defendant produces the original of a letter from H. L. Reynolds, purporting to be the attorney for Mr. Bassett and I have here a carbon copy, which by their consent is substituted. There is no objection to this letter.

MR. SHANK: No objections to the letter.

THE COURT: It may be admitted as Exhibit "2."

MR. SHANK: I would like to have that blueprint, Mr. Shepard, that is referred to there put in as part of the exhibit.

THE COURT: Just attach that as a part of Exhibit "2".

There will be a letter included in it.

Nov. 28, 1910.

Erickson Contruction Company,
Pioneer Building,
Seattle, Wash.

Gentlemen:

I have been requested by Mr. Henry W. Bassett, to notify you that the forms used by you in placing the concrete lining in certain parts of the North Trunk Sewer system in Seattle are copied from the forms used by him in other parts of the same work.

Mr. Bassett has an application for patent filed covering these forms and expects to receive a patent therefor soon. If you desire to continue their use you will please see Mr. Bassett or myself and arrange for taking out a license, which Mr. Bassett is willing to grant upon very reasonable terms.

In the meanwhile I wish to notify you of your infringement of his rights, and that their unauthorized use is forbidden. Unless you arrange for a license you are hereby notified to discontinue their use.

I enclose blue print showing the general features of these forms for an egg-shaped tunnel having a brick lining in the invert. More detailed information may be had upon application.

Yours truly,

Case No. 2059. Plaintiff's Exhibit 2. United States District Court, Western Dist. of Washington. Bassett vs. Erickson Construction Co. Filed Jan. 15, 1913.

MR. SHEPARD: You have not the original of this? (Indicating paper.)

MR. SHANK: We have not the original of that.

MR. SHEPARD: It is a copy of a letter, notice having been given to produce the original.

(Counsel for plaintiff read the copy of letter referred to, which was thereafter handed to the clerk and marked plaintiff's Exhibit "3" for identification).

Q Mr. Bassett, this is a carbon copy, is it not, of the original? (Handing witness paper.)

A Yes sir.

Q It is a carbon copy, is it not?

A It is, yes sir.

Q You signed the original?

A Yes.

Q This letter mentions copy of letters patent. Did you inclose a copy of the letters patent with the letter?

A Yes sir.

Q What letters patent was it a copy of?

A It was a copy of the patent that I received on this form.

Q The copy which you sent contained these same printed specifications?

A It was a duplicate; it was the same as that.

Q And the same drawing?

A Yes sir.

Q You procured those copies of drawings and specifications from the patent office, did you not?

A Yes sir, Mr. Reynolds secured them for me.

Q And they usually furnish them to patentees?

A Yes sir.

Q State whether or not the defendant desisted from the use of these forms according to this patent?

A No sir, he continued to use them.

Q Do you know for a fact and of your own knowledge that they actually used it themselves?

A Yes sir, I do.

Q Do you know that they used it before you sent this letter?

A Yes sir.

Q Do you know whether or not they used it after you sent the letter?

A Yes sir, they did.

Q What is this which I now hand to you?

A That is a model of the patent that I secured.

Q The model of your patent, of your invention?

A Yes sir.

THE COURT: Did you offer Exhibit "3," Mr. Shepard?

MR. SHEPARD: Yes.

THE COURT: I didn't hear you offer it.

MR. SHEPARD: I haven't said yet that I offered it, but I had him identify it. We now offer in evidence this model.

(Model handed to counsel for defendant)

MR. SHANK: No objection to this being offered as illustrating the witness' testimony. I don't want by that admission to admit that this is either a copy of the patent or a copy of anything that we used.

THE COURT: Mr. Shepard, I asked you about the carbon copy of the letter of October 20, 1911, that you have been reading from. Have you offered that in evidence—the last letter you read?

MR. SHEPARD: That is the letter from Mr. Bassett and that has been offered in evidence and I think that is Exhibit No. "3".

THE COURT: Well, it is Exhibit "3", but I haven't admitted it. I didn't hear you make any offer of it.

MR. SHEPARD: I beg Your Honor's pardon. I thought I did offer it and I read it to the jury. I now offer it.

THE COURT: Any objection?

MR. SHANK: No, Your Honor. That is to Exhibit "3"?

THE COURT: Yes.

MR. SHANK: Exhibit No. "3", we have no objections to the copy being introduced instead of the original. I will state to the Court that we searched for the original but we are not able to find it—that it was ever received.

MR. SHEPARD: Due notice was given to produce the original.

THE COURT: Very well. It may be admitted.

Copy of letter referred to admitted in evidence and marked Plaintiff's Exhibit No. "3".

Second Ave. and Bell St.,
Seattle, Wash., Oct. 2nd, 1911.

C. J. Erickson Construction Co.

Pioneer Bldg., City.

Gentlemen:

Enclosed please find copy of Letters Patent on forms for construction of concrete sewer which you are now using and which your men took patterns from my work at Green Lake at the time you started the Fremont Section of the North Trunk Sewer.

My charge will be ten cents (10c) per lineal foot for the amount of sewer you have used my forms on. Kindly send check to me covering this amount and oblige.

Yours truly

Case No. 2059. Plaintiff's Exhibit 3. United States District Court, Western Dist. of Washington, Bassett vs. Erickson Const. Co. Filed Jan. 15, 1913. F. L. Crosby, Clerk.

MR. SHEPARD: This is marked Plaintiff's Exhibit "4".

THE COURT: It may be admitted.

Model referred to admitted in evidence and marked Plaintiff's Exhibit "4".

MR. SHEPARD: Plaintiff's Exhibit "4".

Q Mr. Bassett, will you now explain to the jury by aid of this model the essential elements of your invention that is patented?

THE WITNESS: Could I stand up down there.

THE COURT: Certainly.

A This model is intended for the form to construct this sewer according to the patent. These rings we call templet are marked No. 1. The two are set up in place and braced rigid and in the bottom we start and put in concrete between this ring before any of this inside is put in, we put concrete there from one ring to the other end, smooth it off and put these two segments marked Nos. 4 in place and drop this wedge—you will notice the wedge shaped piece drops down in and crowds those up tight, then they are braced like this, the piece put across through these two, this marked No. 6 and two 10's, to hold that down, and in the open cut we usually brace from those out to the walls to keep this from coming up, then we fill in behind these No. 24 and 20—no, it is Nos. 4 and 5—fill up to this point here; then there is No. 3, we start with that, put that in place, we tack this No. 3 in place here with a small wedge put in temporarily, this nail we just put in temporarily, build these segments around and tack them to this No. 1; all these other segments are marked No. 2; this one marked No. 3, is the one that the wedge holds in place, and after they are complete put in this bracing system of the brace No. 7 and radial brace No. 8; then take the

wedges out and drive these nails at either end to expand this tight against the inner periphery of No. 1, then the form is all complete, we finish it with the concrete or flush with this; this end then after the concrete sets, is taken off and moved ahead here—whatever section we use, 16 or 20 feet, or whatever section we want—set up again, and the next section—these are left in and the next section goes right on to here, laps on to this, and the front end is in a continuation of this; put up the braces; we also put some braces inside, whatever is necessary, owing to the size of the sewer, if it was a large sewer we would put them close together, if it was a small sewer we would not use so many, these forms after we got—we usually had four or five set and when they had set up enough we would come up behind, take this section out and set it up ahead, four or five sections of it, we put in a large strip of concrete.

Q The same method is used whether you work in an open cut or an underground sewer substantially?

A No, not altogether; in the tunnel section we only used this up to the center and put a brick arch there; in most places we did use this inside; in places where the earth was hard enough to hold up we could use this system complete inside with the exception of one section on top we left for filling concrete.

The witness further testified that various numbers on the models corresponded to the numbers in drawings of this patent, and that the essential fea-

tures of this patent consisted of the outside restraining band, the lagging, the invert and the system of bracing to hold the pieces, and the lagging from falling inward.

Upon CROSS-EXAMINATION witness testified:

Q (MR. SHANK): What is your business?

A Contractor.

Q How long have you been a contractor?

A It is about five years at this time.

Q What was your business before that?

A I was superintendent of construction for the Pacific Coast Company?

Q How long were you engaged in that capacity?

A About 8 years.

Q What were you engaged in prior to that?

A Why, just prior to that I was contracting on buildings.

Q On buildings?

A Yes sir.

Q What was your relation to Grant Smith & Company?

A I was a partner in that particular piece of work, the sewer work.

Q Grant Smith & Company secured a contract from the City to put in a piece of sewer construction in the north part of the city?

A Yes sir.

Q Who prepared the plans for that sewer construction?

A Why, the plans were furnished by the City; I don't know just who the architect was.

Q Well, they were furnished by the City Engineering Department, were they not? A Yes sir.

Q They gave you specifications and accompanying those specifications were detailed blueprints showing the manner of the construction? A Yes sir.

Q And these detailed blueprints showed a circular sewer with a notch in the bottom, which we denominate in this case or in your testimony as the invert to receive brick? A Yes sir.

Q Did you ever construct a concrete sewer prior to the time you commenced this work with Grant Smith & Company?

A No sir.

Q Did you ever see any concrete sewer constructed?

A No sir, I never did.

Q Who was the foreman upon the job?

A Well, I had a good many foremen; there were several of them.

Witness then testified that McLean, one Royea and Fitts, of whom McLean and Fitts were foremen the first month of construction and that he did not retain all these foremen upon the job during the entire construction.

Q After you got this contract for the construction of this sewer what did you do first in the preparing for the construction of it?

A In the first place we cleared some right-of-way and we dug open the trench and started to put down some shafts ready for tunneling work.

Q When you began to prepare for the actual pouring of concrete where did you get your first forms with which to make the first section?

A I had them made at a mill.

Q You took the blueprints down to the mill and asked them to make the segments, did you not?

A No sir, they never saw the blueprints.

Q They never saw the blueprints.

A Not the first mill that I had them made.

Q Did you not take the blueprints which the City gave you and exhibit them to the pattern maker at the mill?

A Not the first set, no sir.

Q Not the first set? A No sir.

Q Well, who made the first set? A They were made at a mill out here on Lake Union, I don't just remember the name of the mill.

Q From what pattern were they made? A They were made from some drawings that I gave them.

Q Well, you made the drawings from the city blueprints, did you not?

A Partly, yes. I took the outlines from the city blueprints, yes sir.

Q You were obliged to make those drawings so that they would conform to the city blueprints, were you not?

A Certainly, that is what we had to build them after.

Q Then the forms that were made at first were from drawings that you copied from the city blueprints?

A I had—I made the drawings, there was nothing on the city blueprints any more than No. 1 on this, that was taken off, the balance had to be made to fit inside of the plan they gave us.

Q Well, did you make your sketches from the City blueprints so that the product from that sketch would fit into the form as outlined by the City blueprints? A I had to make the forms—

Q Answer my question, if you please.

A Yes sir.

Q The first things that you had made were in fact the segments, these different segments that go to make up the form of the sewer, were they not?

A Yes sir.

Q Did you have anything else made at that time?

A In what respect?

Q Well, I am asking you, did you have anything else made at that time?

The witness then testified that the complete form was made just as his model illustrated, with the exception that the segments were cut down as they were found too heavy.

Q That you had these particular braces made at that time?

A No sir, I didn't have those braces made at that time; we nailed them up.

Q I am not directing your attention to what you had made. Did you have anything made but the restraining band and the segments?

A There was the restraining band, the segments and key was all that I had made there, I got the material at the time for bracing.

Q You had the keys made then, did you?

A Well, we had wedges, I don't remember just what we had made there.

Q Well, I want to know what you had made at that mill. Did you have the keys that are described as 13 made at that mill?

A I don't remember whether we did or not, I don't know that we ever had those made at the mill; it is a very simple matter to make a wedge.

Q Then what you had made were the segments and restraining band?

Witness then testified in response to questions that he had first six foremen employed and that he did not calculate the type of bracing necessary to hold the segments out against the restraining band as he considered any carpenter could put braces to hold them out.

Q Any carpenter could make those segments too, couldn't they? A They could after they got a plan, yes sir.

Q Anybody could take the blueprints which the city had made and make those segments, couldn't they? A They might.

Q Would they not have to make those segments in that shape if they fitted them in to the City's plans?

A Not necessarily, no sir.

Q How could they make them and fit them in to the city's plans without making those segments in that shape?

A They could very easily make a ring and nail boards on, those inner circles complete, nail boards on and then tear them out.

Q I would like to know how you would get them out. A That is the reason I figured this out the way to save my material.

Q You figured it out when? A I figured it out when I started that work in the spring of 1908.

Q Did you figure it out before you went to the mill or afterwards?

A Before.

Q Then you want to change your testimony from what you testified to about five minutes ago when you said you had not figured out how you would hold those in place?

A I said I didn't consider the bracing any importance; any carpenter could brace them; I say the plans and the general working of it I figured out and drew it and had the segments made.

Q Have you a copy of that sketch with you?

The witness then testified that he did not have the sketch nor had he sought to get it prior or subsequent to the commencement of this action.

Q Have you ever seen those sketches from the day you delivered them there until this day? A I think I went down to the mill, I believe I went down to the mill and showed the carpenter making the plans, helped him to lay them out on the floor,

the sizes, there were so many different sizes.—I did not see the sketches after I got through ordering material there.

Q Did you ever do any experimenting with anybody with reference to the manner in which you could most economically form this concrete sewer according to the plans and specifications of the City?

A. I might say yes, if you will allow me to explain. Mr. Fitts, the foreman I had—

Q Did you ever do any experimenting with anybody else?

A No sir, not that I remember of.

Q Did you ever have anything to do with Mr. Paley?

A With Mr. Paley, no sir.

Q You never had anything to do with reference to having him try to work out for you a form and you actually furnished the concrete with which to mold it?

A I had nothing to do with his furnishing the form; I gave him some cement; he got up a steel form and wanted me to use them.

Q When did you get that up?

Witness then testified he thought it was in the summer of 1908, three or four months after he had started construction work and that he did not go to see Paley, but Paley came to him.

Q What was your particular interest in looking over Mr. Paleys' form for molded conduits?

A It was a matter of his duplicating my forms

and making them of steel, whether it would save us any expense.

Q Duplicating your form? A Yes, he took his form off of mine; we were using this form when he made his forms.

The witness further testified that he saw the Paley forms afterwards, but entered into no negotiations for the furnishing of steel forms with which to do his work. He did ask him the price of making steel forms for the purpose of ascertaining whether they would be economical.

Q Mr. Paley's form was an exact model of your form?

A It was the segments; the outside was just the same.

Q It made the invert at the bottom for the brick?

A Yes sir.

Q And it had the segments that went over the top?

A Yes sir.

Q And Mr. Paley made an application for a patent and it was refused, wasn't it? A I understand it was, he had to swear that he got it up himself, which he couldn't do, he took the pattern off of mine, that is the reason he couldn't get the patent, he didn't want to perjure himself.

Q Who represented the city upon that work out there at that time?

The witness testified that Mr. Worley the inspector was there and that he himself spent all of his time on the work practically for a period of three

years; that he was there when the men went to work in the morning but did not remain there all the time.

Q Were you out there when they set up¹ the first set of segments that were delivered on the job?

A I was, yes sir.

Q Were you there when they set up the first restraining bands upon the job?

A Yes sir.

Q Are the restraining bands shown in Plaintiff's Exhibit "4" exact duplications of the restraining bands that were first set up on the job?

A I don't remember just—I think not exactly; that is the shape is the same but I think we made them heavier afterwards; the first ones that we used we found to be a little too light.

Q Don't you know as a matter of fact, Mr. Bassett, that the first forms that you tried to use out there, the first hoops, were only half that size, the lower half, and you made them out of one inch stuff? A There was a good many places we used them that way, it was owing to the size of the sewer; some places we cut them in two.

The witness then testified that for the first set of forms they used a complete circle and that he tried to set up the first form first but the mill people didn't get them square and he had to take them apart and square them up and then he found the segments too wide to handle easily and he cut them down.

Q How did you brace them?

A I didn't remember just what particular mode we used at that time; we took ordinary timber and cut them inside.

Q Did you use the bracing such as you have shown in your exhibit "4"?

A No sir, not at that place, no sir.

Q Now, what is your best recollection of the kind of bracing you used?

A Well, I think we put in 2 by 6s and put them in promiscuously; we put an upright in there; the bottom was practically the same.

Q You braced every joint of the segments, did you not?

A Yes sir.

Q And you braced it thoroughly?

A Yes sir.

Q And then you went back here about two feet from the edge and put in another set of the same kind of bracing?

A. I would say three or four set between, intermediate stays.

Q. As the man in charge of that job out there can't you state to this jury how many sets of bracing you had in there?

A. I couldn't say at that particular time because owing to the size of the section, if it was large we had to put them in thicker, if it was a small section—

Q. Didn't you have all the same sized sections?

A. No sir, we had a great many different sized sections.

Q. I am now talking about the first section that was put in. Was it sixteen feet or twelve feet?

MR. SHEPARD: Do you mean the length of that?

THE WITNESS: Do you mean the length of the form? I don't remember what the sections were.

MR. SHEPARD: We object as immaterial, entirely immaterial to the issues on any question of law or fact.

THE COURT: I don't know whether it is or not. Objection overruled.

Q. How long were the segments that you used on the first form that you made?

A. I don't remember on that first section we put in.

Q. But you did brace every joint where the segments came together?

A. Yes sir.

Q. And you did not use the form of bracing that is shown in your model?

A. No.

Q. You had considerable trouble in getting bracing there, didn't you?

A. Why, I don't know that we had any particular trouble, we didn't have any trouble about its collapsing or anything; we put in bracing enough to hold it up, and then we started in to simplify the bracing.

Q. Well, you braced clear across the diameter of your tunnel, didn't you?

A. Yes sir.

Q. And you cross-braced it across the diameter?

A. Yes sir.

Q. And you thus continued the bracing until you had every point braced?

A. Yes sir.

Q. Then you put in some other braces that held these braces in place, didn't you?

A. I don't remember just exactly how we did brace the first set.

Q. Well, do you know how long it took you to set up that first section?

MR. SHEPARD: If the Court please, we object to this cross examination. It is entirely immaterial. Counsel is cross-examining the witness with reference to bracing and other particulars as to a job that was undertaken and carried out by the plaintiff as a contractor with the city prior to the granting of the patent, and so far as we know prior to the application for the patent, and as there is no relation shown between that work and the structure or the forms which Mr. Bassett used there on that city job and this particular patent.

THE COURT: Objection overruled.

MR. COOK: Exception, if your Honor please.

Q. How long did it take you to set up that first section?

A. Well, sir, I don't remember; I know that—

Q. Well, what is your best recollection, you were superintendent of the job and paying the bills?

A. I believe it was a couple days before we got the first section—

Q. How many men did you employ?

A. There was three or four there.

Q. Then how long did it take you after you got those forms set up to pour the first section?

A. I believe we poured the first section there in a day.

Q. How is that?

A. One day I believe.

Q. One day. Then it took you three days, to set up the first section and pour it?

A. I believe about that time.

Q. Then how did you get that section down?

A. We got it down practically—we had it keyed up; it was no trouble to get it down.

Q. Didn't you have to tear the whole thing to pieces to get it down?

A. No.

Q. Didn't you in fact when you set up that section fail to make a calculation as to what would be the effect upon the invert there and when you got your concrete poured the invert was fastened in there by the edges of your concrete and you had to chop out the center segment in order to get out your invert?

A. No sir.

Q. Did you chop out any portion of your invert in order to tear that down?

A. No sir, I did not.

Q. Tell this jury then how you got that invert out?

A. I explained that to them before; the center piece is made wege shaped.

Q. Was the center piece on the first form that you made wedge shaped?

A. It was, yes sir.

Q. That was the original plan to make that wedge shaped?

A. That was the original plan, yes sir; it is made wedge-shaped so that when the braces come off this bottom lifts right out; see the shape of it. The witness further testified as follows: that it required three days to set up and pour the first section and that he had no difficulty in taking it down, and to his knowledge the same system of bracing was not used in the succeeding section, but that he did use the type of bracing exhibited in his patent drawings.

The witness then testified when asked if he had investigated any prior patents bearing upon the making of forms for molded conduits, that he did not see any for wooden forms, but that some agents came to sell him the Blaw patent, and remarked that "there was some other patents", and that this was about the time he began work on his north trunk sewer.

Q. Did you ever use the form of braces that you are exhibiting here to the jury?

A. I believe we did.

Q. Where?

A. I don't remember just the exact location; there was seven miles of that sewer and so many differ-

ent sections operated upon that I would not remember exactly.

Q. How do you recall then that you ever used the form that you are exhibiting here to the jury as your patent?

A. Because I got it right up; I got this up and used it; the first section that we put in there was practically identical with this section the way it is now.

Q. You did not use that bracing?

A. Out side the bracing.

Q. Don't you claim in your patent that one of the particular elements is this matter of your bracing?

MR. COOK: I object to this.

THE COURT: The patent speaks for itself.

MR. SHEPARD: The patent shows for itself.

A. I claim the whole thing is a combination together.

Counsel then read claim six and asked witness if the transverse sill is not one of the particular things he is claiming a patent for.

A. Yes sir.

MR. SHEPARD: We object to that. He is not claiming a patent on that particular thing. He is claiming a patent on the combination set forth in the patent.

THE COURT: The patent speaks for itself.

MR. SHANK: This is the patentor, Your Honor, and we are entitled to ask him what his claims are. If he is a mechanic we will find out.

MR. SHEPARD: The government has said what they will allow in the claims. The patent shows for itself.

MR. COOK: I ask counsel to read claims 1, 5 and 6, on which we claim infringement.

MR. SHANK: I will read them.

THE COURT: I don't know how he could read them all at once.

Q. One of the particular things set forth in the section 6 that I have just read is the transverse sill, is it not?

A. That is one of them.

Q. Now, when did you begin to use that transverse sill with the bracing such as you have outlined in this model?

A. I don't remember just exactly what date we used it.

Q. I am asking you if you ever used it.

A. I say we did.

Q. Where?

A. Well, I don't remember; as I say, the sewer there, as I said, was seven miles, about practically seven miles of it, and there were so many different places that we worked at with a great many different carpenters setting up forms that very often the carpenter I left it to him; we used different sets of bracing.

Q. Now, you mean to state then to the jury that you used that exact form of bracing?

The witness then testified that he was pretty sure he had, and that the bracing was being changed as

he was experimenting at that time to find a bracing most adaptable.

Q. And the carpenters were the men who were doing the experimenting?

A. Some of them.

Q. Did you do any experimenting yourself?

MR. SHEPARD: We object to that as immaterial.

THE COURT: Objection overruled.

Q. Did you do any experimenting yourself?

The witness testified that he did not do any of the experimenting himself, that he was superintendent of the work, and was present when the foreman gave the instruction.

Q. Have you been present when concrete was poured over that form that you have exhibited here?

A. I would not say—

MR. SHEPARD: I object to that as immaterial. The exact bracing is not an essential element of the patent. As has been decided in a great many cases by the United States Supreme Court, the form is immaterial or the equivalent used, unless the patent calls for the precise form.

THE COURT: I have not read the patent and of course I do not know.

MR. SHANK: If the Court please, that is not the point of my examination.

THE COURT: I do not think it is either.

Q. Now, Mr. Bassett, did you ever at any time, calculate the system of strains that would come upon

these segments and this bracing when the concrete was poured?

The witness testified as follows: that he had not calculated the strain on any particular point, but that he could determine the pressure by having access to a book.

Q. Don't you know as a matter of fact that when concrete is poured in there and begins to settle around that form that segments 21 would absolutely break in?

A. No sir, they would not.

Q. Don't you know that as a matter of fact segments 21 cannot possibly be held by those friction wedges?

A. I know they would hold.

Q. But you never used them, did you?

A. We used them right along, yes sir.

Q. But you said a while ago that you braced every one of these points differently?

A. I braced them as those are braced.

Q. Just the same as those are braced, but that is not in accordance with your patent, is it?

A. It was.

MR. SHEPARD: I object to that. That is a question of law. It is a comparison between the patent and the model.

THE COURT: Objection overruled.

Q. You have made a model that embraces more segments than your patent, haven't you?

A. Yes sir.

Q. And you have sought here to put in the braces showing that it was your intention to brace every one of these—

A. It was necessary to brace every joint of the segment, yes sir. The witness then testified that he had never put in any twelve foot sewer, consequently could not calculate the size of the braces to be used; that he had put in 11 foot 6, and used braces in his opinion would sustain the pressure.

Q. Mr. Bassett, can you state to the jury what the effect will be upon transverse sill 6 by the pressure upon the top of the segments bearing heavily upon upright brace 7?

A. The pressure would be a downward pressure, yes sir.

Q. A downward pressure?

A. Yes sir.

Q. What would be the effect of that downward pressure upon the invert segments? A. It would hold this down, it would hold the inverts, the strain would die out here on these points.

Q. What effect will the pressure upon these different braces have upon the tightening of the segments in the invert, if any?

A. Not any.

Q. None at all?

A. No sir.

Q. There is no method then by which the pressing above has any effect upon tightening the segments in the invert?

A. No sir.

Q. None whatever. The segments above are supposed to move peripherally within the segments in the invert; is that correct?

A. That is correct, yes sir.

Q. Now, how did you meet the conditions with that form of bracing when your segments would swell and enlarge?

A. We adjusted them with these wedges here.

Q. And were you always able to take up the slack with those wedges? A. Yes sir, well, we could make a larger wedge if necessary; ordinarily the timber came out dry and swelled and we had to cut off some off of this transverse piece in here.

Q. And every time you chopped off that transverse sill you reduce the bearing strength of the transverse sill upon the lower segments, didn't you?

A. No sir, not necessarily.

Q. Do you mean there was no lessening of the bearing strength of the transverse sill as you cut that off to admit wedge 13?

A. Not necessarily.

Q. Now, Mr. Bassett, one of the particular things that you regard in this case as calling for inventive genius, and which you claim is new and novel, is the method of getting these segments out so that they will slide peripherally within these—

MR. SHEPARD: I object to that question, Your Honor.

A. The whole combination together.

Q. You are claiming a combination patent then?

A. I mean I am claiming a patent on the whole combination.

Q. Is there any element in that construction that is new?

MR. SHEPARD: I object to that as immaterial. The question is not as to particular elements; the question is whether the combination was new; the United States said it was.

THE COURT: I assume that he means by whether it was new whether it was in use beforehand.

MR. SHANK: Yes.

THE COURT: Objection overruled.

Q. What elements in there that you concede are new?

A. I don't know that any particular one is new.

Q. And the result of the use of those elements is to produce a concrete sewer of circular form with an invert?

MR. SHEPARD: I object to that as immaterial. The result of the combination is to produce it, not the separate elements.

MR. SHANK: That is my question.

MR. SHEPARD: The question didn't state.

MR. SHANK: That is what I meant to ask if I did not.

Q. The result of the combination of the elements that you say are all old is to produce a circular sewer, concrete sewer, with an invert to receive brick?

A. Yes sir.

Q. That is it?

A. Yes sir.

Q. Now, Mr. Bassett, don't you know that concrete sewers have been made with inverts to receive brick for a good many years?

A. I don't know how many years; I had a foreman that had done work before; he told me as soon as I gave him the form that I ought to get it patented.

Q. Did you ever examine into the patents that had been used prior to this with reference to making forms for molded conduits?

A. No sir.

MR. SHEPARD: That is immaterial and irrelevant.

THE COURT: I think under the allegations of the pleadings that it is material.

(Further discussion.)

THE COURT: Well, I have already ruled on it. We may disagree as to the reasons.

Q. In making these segments did you at once determine the size that you would construct?

A. You mean the width of the segments?

MR. SHEPARD: We object to that as immaterial.

Q. Yes, the width of the segments.

THE COURT: I don't understand the question, Mr. Shank.

MR. SHANK: I am asking him if at the beginning of his construction work he then determined the width of these segments?

MR. SHEPARD: That is entirely immaterial.

THE COURT: I think that is immaterial.

MR. SHANK: It goes to a point, Your Honor, that I will follow up in a minute later.

THE COURT: I think he has already covered that in his former testimony, that he started out and they were too small and later on he made them larger.

MR. SHANK: I want to show that as a matter of fact he made the segments narrower each time rather than larger.

MR. SHEPARD: That is immaterial, Your Honor.

THE COURT: He has already stated that, anyway.

MR. SHANK: I will ask the question and then you can make your objection, Mr. Shepard.

Q. Mr. Bassett, did you not, after the making of your first segments, make the subsequent ones narrower rather than wider?

MR. SHEPARD: I object to that as immaterial.

THE COURT: Let me ask: does the patent claim anything as to the size of the segments?

MR. SHANK: No, Your Honor, but the patent shows three segments in the upper half and this shows five.

MR. SHEPARD: That is merely illustrative, there is not a word in the patent on it.

THE COURT: It is illustrative of what you claim to be the patent. Objection overruled.

MR. SHANK: I should say that the patent shows four and this shows six, to be exact.

MR. COOK: We except to that ruling.

MR. SHANK: Answer the question.

THE WITNESS: Repeat the question please.

MR. SHANK: Read the question please.

(Question read.)

A I believe we did, yes sir.

Q What was your object in doing it? A To handle easier.

Q Just to handle easier and that was all? A Yes sir.

Q Are you presenting this model, Plaintiff's Exhibit "4", as an exact model of your patent? A Yes sir.

Q And do I understand that the end with the bracing is the outer end of the patent, whereas the other end represents the end that is exhibited by figure 2 of your patent?

(Handing witness paper.)

A That is it, yes sir.

Q In other words, you are exhibiting this model—

MR. SHANK: Mark this end something so we can refer to it, please.

(End of model marked "4"—a")

Q "4-a" you mean to represent to the jury is an exact duplication of figure 2 as set forth in your patent? A Yes sir.

Counsel reads claim 5 and requests witness to point out to the jury the respective elements in the claim as he proceeds. Q (Continuing reading.)

“the transverse rib at one end projecting beyond the ends of the lagging and at the other end the lagging”— Where do they project in that model? A Here is where the lagging extends beyond these cross ribs.

Q I am now directing your attention, Mr. Bassett, to figure 2 of your patent and I am referring to the interlocking device which you have shown at the joiner of the two sections; is that correct?

A. That shows that there.

Q Does this model show it? A The model does not show it.

Q The model does not show it. Now, what is the purpose of that interlocking section? A Well, that interlocking section would help—you see where we join the other on to this end as we put it up that by going in there would catch on here and hold it up. Q Yes, and as this form is fixed on to the form that you have just made there is an engaging member that interlocks it so as to hold it in there, isn't there? A There should have been, yes sir.

Q. And it interlocks with the cement form? A. With the one that is in.

Q. That is in the cement form; that is correct, is it? A. That is correct.

Q. Then I would like to have you describe to this jury how you can drive wedge 13 in order to produce a peripheral motion of the segments on the upper part of that form. A. Those segments

are all adjusted the same size at this end, fit together; these wedges here would adjust themselves.

Q. Yes, but how can you tighten this up here at the other end? A. It will fit itself. Q. Supposing one member is wet and swollen—they do swell when they get wet? A. Yes sir.

Q. And supposing another one is dry; how do you engage them? A. We have them fixed the same width. Q. Then the peripheral motion itself applies only at the outer edge here? A. The peripheral motion applies clear back through here.

Q. How can it apply back through here when these points are engaged and can't move? A. These points do not need necessarily to be so tight but what they can take a certain amount of peripheral motion.

Q. They have to take a certain amount of peripheral motion or else you get a spiral? A. No sir, this is the end sticking out; now, these other forms being built exactly alike, they all would be just the same width unless one of them might swell a little bit, but in case it did it would be a very easy matter to give it a little adjustment here and at the other end is where you key it up.

Q. Yes, but these transverse ribs that you have shown here in your form 2 extend out, don't they? A. They extend out a little, yes sir. No sir, not here.

Q. Every alternate one extends out? A. It should.

Q. So that when you come here and put your next form on this they engage here with this so as to make an interlocking device, don't they? A. They could, yes.

Q. Well, don't they? A. They do, yes sir.

Q. I want you to explain to the jury how it is that you can produce a peripheral motion at the end where you engage those segments with the form that has just been—. A. I don't know whether we used it. I know that it could be used.

Q. Then you know also that if that interlocking device can be used there, if you have a four inch space to take up at the end of your next section, that you have got to make a spiral out of these segments when you take up the slack at one end and it is interlocked at the other? A. I want to answer it in this way: we also have this templet marked "1" to adjust our segments to; it would not be probable or hardly possible that there would be a four inch adjustment at the other end when these are all fitted together.

Q. But you say as a matter of fact sometimes you have got to cut away this transverse bar here in order to get your ribs in there? A. Yes sir.

Q. And when you put in new braces there might be a lot of space to be taken up there? A. There might be, but it has to fit.

Q. Don't you in practical operation find that the space at this point "13" varies at every setting of your form? A. A little.

Q. And you can't calculate how much space you have got to take up? A. Not always, no sir.

Q. Then this model that you have shown here is not a model of your patent, is it? A. Not exactly, no sir.

A. This projection here does not necessarily have to be perfectly tight; there might be some adjustment in it.

Q. Supposing you have a four inch space at one end, which you have to take up for your peripheral motion, and suppose you have a one inch space at the other end which you have to take up, how do you take up four inches at one end and one inch at the other with that interlocking device?

A. You would not have to take up any at this end; this when it is put on locks up tight.

The witness further testified that feature of interlocking was used at some places on the work.

Q. Mr. Bassett, is it not a fact that if you put the weight upon this form with the system of bracing that you have there that the weight of the concrete upon that form, or a sufficient weight there would collapse that whole system of bracing?

A. No sir.

The witness further testified that the reason why that system of bracing was not used at all times was due to the fact that he had different foremen in charge of the work, and that he could not remember which foreman was present when that particular system of bracing was employed.

REDIRECT EXAMINATION.

BY MR. SHEPARD.

Q. Mr. Bassett, as nearly as you can fix the date, when did you first use your invention as embodied in this patent?

A. It was along about the first of July, 1908.

Q. You had conducted some experiments before that, had you?

A. I believe that it about the time that I first used it.

Q. Did you conduct any experiments after the date of July, 1908?

A. Well, that is about the time that we tried them out and perfected the scheme.

Q. You then had it in public use from that time on while you were performing that contract? A. Yes sir.

MR. SHANK: Don't lead your witness, Mr. Shepard, please.

Q. Do you remember when you filed your application. A. It was some time about March, 1910.

MR. SHEPARD: If the Court please, we now offer in evidence a certified copy from the patent office files of the application.

Paper admitted in evidence and marked Plaintiff's Exhibit "5".

Q. Mr. Bassett, I am not sure that we all understood perfectly what was meant by peripheral motion. Will you please explain it to the jury, illustrating on this model, what is meant by peripheral

motion? A. Peripheral motion is movement in this way, in direct line with the periphery of the circle; peripheral motion would be moving this in practically a direct line with the—

Q. What would motion expanding outwardly be called?

A. Centrifugal.

Q. Something has been said about the peripheral motion of these upper segments over the invert segments? A. That would be the chance for it to slide down over the invert segments while assembling them, getting them together; then the wedges are put in here to adjust them, tighten them up; that is what I call the peripheral motion.

Q. That is mentioned in one of the claims of your patent as one of the elements of the combination. Now, state what particular claims in your patent you assert are infringed or have been infringed by the defendant?

The witness testifies as follows: That claim 1, 5 and 6 the one specifically pleaded, and then proceeded to read them and point out the respective elements of each claim to the jury. The witness then testified that in the defendant's forms instead of using this one segment on a wedge shape, they made their forms practically all alike and used a narrow key; in this center segment of the invert which is made wedge shaped to move upward in the forms, they used instead of using this in this shape they used two long keys, each one of which formed

a wedge shaped piece, so that they could take it out and loosen up the invert.

MR. COOK: Did they always use two? A. I don't know what they did; the one that I went into the one I saw them using there was two in; the wedge shaped piece was just the shape of this segment mentioned, three segments made alike and this wedge shaped piece dropped in there to tighten these up, it performed the duty of this one.

Q. Have you seen that actually in use in the defendant's work?

A. Yes sir.

Q. Where? A. It was on the Lake Washington section.

Q. When? A. It was 1911; some time during 1911.

Q. Before this suit was begun or after it? A. I don't remember whether this suit had been started or not; I think it was.

Q. Have you a model here by which you can show what the defendant—the sort of structure that the defendant used? A. Yes sir, I have a model here that shows it.

Q. What is this model intended to represent? A. This represents the forms they were using at the time I looked them over.

Q. You saw that form actually in use there, did you? A. Yes sir.

MR. SHEPARD: We offer it in evidence, Your Honor.

THE COURT: Exhibit "6." Any objection?

MR. SHANK: No objection to its going in to illustrate the testimony of the witness, but not as an admission of what we used.

THE COURT: It may be admitted.

Model referred to admitted in evidence and marked Plaintiff's Exhibit "6".

Q. Mr. Bassett, please explain to the jury now the features of this model and wherein they agree or differ with that which was actually used by the defendant.

A. This model is the form that I saw them using at the time I went upon their work; they had these keys in here marked 22, those keys you see are wedge shaped and loosen up this invert when the concrete is set, so that instead of having the one segment to lift out here, they would take these keys out and that loosens up these segments and the invert; that is one difference; the other is in the supporting frame that they have inside, which shows, as the witness further testified, that in place of the radial bracing the defendants used a semi-circle arch and a solid sill in place of a transverse sill illustrated in the patent drawings; also instead of a solid ring the defendant used a divided ring.

Q. How about the invert; was there any opportunity for peripheral motion in the segments over the invert or not? A. Yes sir, just the same; the wedges are used here to adjust the upper segments the same as in the other.

Q. Now, will you please explain to the jury about this interlocking device at the end of each section

when it is made? A. We didn't always use those, and in fact I don't remember just where we did use them, but we used them at certain times and there was other times they cut them off and used them just as these forms show, but there was—we used them at times where one of these segments was cut off and the other set in right in here so as to hold the segments up as we came on around.

Q. What do you mean by the interlocking device?

A. The interlocking device is one of these longitudinal ribs passing the end of the lagging, the skin to this, and at the other end one of them was cut off so it would project in there.

Q. You were cross-examined this morning by counsel for defendant with reference to a supposed case of an unusual amount of slack at the new end and a less amount at the old end where you fit into the last section. Now, he asked you if there would not be a spiral formed there. Explain to the jury how in actual practical operation the thing would work? A. This form is put up in this shape and the concrete molded over it and set and this ring is taken away and moved ahead, which leaves this form the size that it was in this; now, when the other section comes on there is must adjust itself to this same size which is the size of this one; at the other end we never was particular, when putting these forms up we put them there temporarily and drove these wedges to adjust them and also when we put in another piece across there, No. 6, and drove wedges in there to help sustain the load in-

stead of putting it all on this, but we used the same ring, which shows it could not be spiral shaped, because this end of this old section is molded to this ring and we set up a new section that conforms to the same ring, used the same ring right along, so there would be no spiral shape.

RECROSS EXAMINATION.

BY MR. SHANK:

Q. Mr. Bassett, without referring to the letters patent, can you state to the jury what particular element in your first claim is infringed, as you claim?

MR. SHEPARD: We object to that as immaterial, because we don't claim any particular element, that is any one element is infringed, but the suit, the action is brought for an infringement of the combination. This is a combination patent and nothing else.

THE COURT: Your associate counsel stated a moment ago that it was only claimed specifications 1, 5 and 6 were the ones that were infringed.

MR. SHEPARD: Yes.

THE COURT: The declaration says that those are the ones that are particularly infringed. I would like to know what the construction is that counsel places on it.

MR. SHEPARD: Perhaps an inaccuracy in stating. We do not in this action claim anything for any infringement except on those three claims. Each of those claims is a combination claim because the whole patent is a combination patent.

THE COURT: Well, it is proper for the patentee to say in what particular those three specifications have been infringed. I don't know how we are going to know unless we are told.

MR. SHEPARD: He may state in what particular they have been infringed, but the infringement is not of any one element.

THE COURT: Well, that is a question of deduction alone.

MR. SHEPARD: Your Honor will pardon me a moment. Speaking of the elements in patent law it means not the separate numbered claims, but the elements making up the combination.

THE COURT: I have no doubt he will go through the combination before he gets through his question.

MR. SHANK: I am proceeding to do that, Your Honor, and this is a preliminary question.

Q. Will you answer my question now. Can you without referring to your letters patent state what particular portion of the description in claim one is infringed by the defendant?

MR. SEHPARD: We object to that, Your Honor, for the reason that we do not claim that any particular, any one element is infringed, but the combination stated in claim one is infringed.

THE COURT: Well, the various elements will make up the combination when you get through with it. He can't do it all at once. Objection overruled.

MR. COOK: Exception, Your Honor.

A. I have not familiarized myself with those points; in fact I have not read them over for a long, long time and to go to work and designate each particular point from the numbers in the letters patent I couldn't do it.

Q. Did you prepare any of these specifications yourself?

MR. SHEPARD: We object to that as immaterial.

THE COURT: Objection overruled.

MR. SHEPARD: He employed an attorney to prepare them.

THE COURT: Objection overruled. I understand by preparation the origination of them.

MR. SHANK: Yes, that is the idea.

A. Yes, I claim to have originated all the ideas, yes sir.

Q. I am asking you if you actually prepared in writing any of these specifications?

A. No sir, I did not.

MR. SHEPARD: We object to that—

THE COURT: Objection overruled.

MR. SHEPARD: —because that was done by the patent attorney.

THE COURT: You can show how it was done if you want to later.

Q. Now, Mr. Bassett, can you specify without referring to the letters patent, what portion of specification 5 you claim that we are using?

A. I stated before that I could not without referring to the letters patent pick out those different—

Q. Can you do so with reference to your specification 6 without referring to the patent?

A. No sir.

Q. Now, we will have you refer to the patent. I wish you would refer to specification 1 and state what particular part of specification 1 we are using.

A. I think I stated that just a few minutes ago.

MR. SHEPARD: Mr. Shank, if you please, a moment. Permit me to correct an inaccuracy in your statement. The specification is the oral descriptive part of letters patent. The claims are what you speak of.

MR. SHANK: He knows what I want.

MR. SHEPARD: They are not called specifications. They are called claims.

MR. SHANK: I put my finger on it.

Q. Now state in your own language what portion of that claim we are infringing.

A. It is the invert segments here, also these segments, the outer band and the recessed portion hereof.

Q. Now, do I understand that you are claiming that you have an exclusive right on the idea of making these segments?

A. Of combining them I have.

Q. Now, I am asking you to go back and check up just the statement you have made. You say we have been using these segments in the invert?

A. Yes sir.

Q. Do you claim that those segments in the invert you have any special right in?

A. I do; the letters patent will show it.

Q. Do you claim that these segments in the upper part you have any special right in?

A. Yes sir.

Q. Do you claim that this notch down here is anything that you have a special right in?

A. I claim the combination, put them together and—

Q. I am asking you if you claim this notch down—

A. I claim everything.

MR. SHEPARD: If the Court please, I object. Let us settle this question. This being a combination patent, it does not make any difference whether each individual element that enters into the combination is new or old. The patent is for the combination, therefore the question asking him whether he claims any particular rights in each separate item or element of the combination is immaterial because it does not reach the legal merits of the question at all.

THE COURT: Supposing when he got through he disclaimed them all.

MR. SHEPARD: The infringement is on infringing the combination.

THE COURT: Well, we will get to that by and by.

THE COURT: Proceed, gentlemen.

Q. Do you claim any particular right in this notch here below?

MR. COOK: I object, Your Honor, as immaterial.

THE COURT: Objection overruled.

MR. COOK: Claim 1, claim 5 and claim 6 in their entirety and not any individual part of this patent, but as a combination as a whole, as brought out in claims 1, 5 and 6.

THE COURT: You have alleged an infringement here and I think the burden is on you to establish the infringement, and I don't know how you are going to find out what the infringement is until you tell us. These are preliminary questions for that purpose.

MR. SHEPARD: This is asking him whether he claims any one element.

MR. SHANK: We will introduce the original record, if the Court please, in which they tried to get a patent on these things and they were rejected.

MR. SHEPARD: It does not make any difference. It is what the patent office has granted.

THE COURT: Gentlemen, the Court has already ruled on this. Proceed.

MR. COOK: I take an exception, Your Honor.

THE COURT: You may be allowed an exception.

Q. Now, Mr. Bassett, that which you have stated just now are all of the features of your claim one which you claim that we have been using; is that correct?

A. That is correct.

Counsel for the defendant proceeds to read claim 5, and after concluding, asks witness if he claims that.

A. I do.

Q. And you claim that we used it?

A. I claim that you used it, yes sir.

Q. And that we used these others?

A. Yes sir.

Q. And those you claim. Now, turn to claim 5. Do you claim that we used this interlocking device which you do not show on your models and which you did not use yourself?

A. Do you say I did not?

Q. You said you did not yourself excepting occasionally.

A. I didn't say we did not.

Q. Well, did you use it?

A. Yes sir.

Q. How much time?

MR. SHEPARD: We object to that as immaterial whether he used it a day or a week or a whole year.

THE COURT: You asked him whether he used it.

MR. SHEPARD: The question is not whether he used it or not, but whether the defendant used it.

THE COURT: You asked him whether he used it. I think it depends a good deal on when he used it and how long he used it before he applied for his patent.

Q. How long did you use the interlocking device?

The witness testified that he could not tell how long he had used that particular interlocking feature, but that he had used it and would produce witnesses on the stand that would testify the length of time it had been used; that he had not abandoned it, but did not claim that the defendants used the particular interlocking device they had reference to.

Q. But you set up in your complaint that we did, don't you?

A. That is only one part of it.

Q. But that is all there is in claim 5, is the interlocking device, isn't it, and yet you claim we used it?

A. The interlocking device, as I understand it, is this projection over here.

Q. Don't you know what the interlocking device is?

A. I know what part of it is.

Q. Don't you know what it all is,—your own patent?

A. I know what the whole thing is, but this projection here is interlocking.

Q. Do you mean to say this ridge around here is interlocking?

A. I do.

Q. Where does it interlock?

A. It interlocks—

Q. An interlocking is an interlocking that prevents a movement that way, isn't it, but that is not an interlocking, is it; that is just the same as if you would take a blackening box that had a lid on it

and put the lid on top of that and turn the lid right around, couldn't you; that doesn't interlock the lid, does it?

A. Peripherally.

Q. No, that is what you are talking about here, peripherally, aren't you?

A. We are, yes.

Q. Then as a matter of fact that is not an interlocking device peripherally, is it?

A. Yes sir, in itself.

Q. Why didn't you show that interlocking device on here?

A. I didn't get a chance to.

Q. Isn't this projection here nothing more nor less than simply the same thing that exists in all sewer pipe or any other pipe where one joint fits on to the other; isn't that correct?

A. To a certain extent.

Q. Well, now, you say to a certain extent. To what extent isn't it?

A. Well, a stove-pipe does not leave the surface here even.

Q. Well, a stove pipe does not leave the surface here even, but a sewer pipe does and a water pipe and a gas pipe does; isn't that correct?

A. No, not always; they have a ridge on. |

Q. That is all owing to the way the pipe is made. It can be molded that way, can't it.

A. Yes sir.

Q. You don't claim this is a patent right?

A. I don't claim that, but the combination I do; I claim the whole thing.

Q. Why do you bring into this case two forms of your molds that are different from the two forms of the molds which you presented before the United States commissioner when testimony was taken in another case?

MR. SHEPARD: We object to that as immaterial and incompetent and irrelevant and it is assuming a fact—

THE COURT: Objection overruled. It is a question of credibility.

MR. SHANK: He ought to know whether he did it or not.

Q. Why do you bring that in?

The witness testified that his attorney had the models made, and that that interlocking feature was disclosed in the model in the other case.

MR. COOK: It does not infringe that feature of the combination.

MR. SHANK: They have alleged it is an infringement of claim 5 and 6. All there is in claim 5 is the interlocking device.

MR. COOK: I object, Your Honor.

Q. As a matter of fact, Mr. Bassett, why didn't you show that interlocking device on here?

The witness testified that as he had previously stated the models were left in charge of his attorneys Mr. Reynolds and Mr. Cook.

Q. Now, on the form that you introduced in the taking of the testimony before the commissioner

you showed a different condition existing with reference to the manner in which—exhibit “6”—the manner in which the segments 24 were made, didn’t you?

A. That was a different case.

MR. SHEPARD: If Your Honor please, we object to that, first, as assuming a fact, and secondly as referring to testimony in another suit against another party, where the infringement did not necessarily coincide with the infringement in this case.

THE COURT: I think it is always proper to show that he may have testified differently in another case, if that is the object of the testimony.

MR. SHANK: That is the point, yes.

MR. SHEPARD: As to the infringement?

THE COURT: It may affect the man’s credibility in some respect.

MR. SHEPARD: That does not apply to this infringement.

MR. KERR: It is the same device.

MR. SHANK: As a matter of fact, the same claims, 1, 5 and 6 are alleged to be infringed in that case.

MR. SHEPARD: That may be, but the infringement in that case is in a different matter and in some different way than in this case.

THE COURT: That is not the question. The question is the way they appeared in these particular models.

The witness testified that the interlocking ends were on the forms introduced in the other case, but

that they were not present on the model in this case.

Q. Now, Mr. Bassett, did not the segment 21 in the model that you introduced before the United States Commissioner rest upon and abut segment 24 and did not rest upon or abut the cross sill 6; is that not correct?

A. No sir.

Q. Now, Mr. Bassett, I want to ask you what particular element in your claim 6 you claim that we are using?

MR. SHEPARD: I object to that on the same ground as before.

THE COURT: Objection overruled.

A. I claim you are using all of them in the claim 6. I would have to read it over.

Q. Well, read it over and then after you have read it over state in your own language what you claim we are using.

The witness testified in substance as follows: It is this peripheral motion whereby these upper segments are permitted to slide down over here and rest against this No. 6 sill and wedge away from that.

Q. Don't you know as a matter of fact that claim 6 does not refer to peripheral motion at all; don't you know that claim 6 does not refer to peripheral motion?

A. No sir, it refers to these segments sliding down there.

Q. It refers to sill 6, doesn't it?

A. Yes sir, and about wedging from it.

Q. And wedging from sill 6; isn't that a fact?

A. Yes sir.

Q. Are the words "peripheral motion" used in claim 6?

A. That gives peripheral motion.

Q. Just answer the question. Is the term "peripheral motion" used in claim 6? Didn't you just read it?

A. I did read it.

Q. Don't you remember?

A. It states about these wedges—

Q. I am asking you a question.

A. "Means for keying the segments outwardly from side sills against the restraining member." That means peripheral motion. The term itself is not in there; nevertheless it gives that peripheral motion.

Q. But you didn't use that term in there, but you did use it in the others, didn't you; you did use "peripheral motion" in the other claims, but you didn't use it in claim 6?

A. No, not the word itself.

Q. You are claiming sill 6 here we used, aren't you?

A. Yes sir.

Q. For blocking up the segments above, aren't you?

A. Yes sir.

The witness then testified in substance as follows: that the only variation is in the bracing; that there

is no mechanical difference in either; that the function is the same.

Q. Would there be the same restraining force in both models?

MR. SHEPARD: If the Court please, we object to that for the reason that it is immaterial.

Q. When did you first go to a lawyer to have your claims put in form for your application?

MR. SHEPARD: We object to that as immaterial.

THE COURT: Objection overruled.

MR. SHEPARD: That has nothing to do with the legal merits of the case.

THE COURT: It might throw some light on it.

MR. COOK: Exception as to that.

The witness testified it was in March that he had been using it 20 months. That he called on Mr. Reynolds in reference to seeking his services in March 1910. That he had been using the forms since July 1908.

Q. Had you made all the improvements upon it that you ever made upon it?

A. Yes sir.

MR. SHEPARD: We object to that as immaterial.

THE COURT: Objection overruled.

MR. SHEPARD: Exception.

Q. Did you state to him anything with reference to the form that you were actually using as contrasted with the form that you were actually seeking the patent upon?

Objection made and sustained by the Court.

Q. You made no changes then between July, 1908, and the time when you made the application, and never have made any changes?

A. There might have been some minor changes, the model itself was just the same.

Q. Do you know whether you made claim to certain things that were denied by the commissioner of patents?

MR. SHEPARD: We object to that, in the first place, because it is immaterial; second, it is anticipating the defense; and thirdly that it is not the best evidence.

THE COURT: He merely asked him if he knows.

MR. SHEPARD: The office record will show that

THE COURT: He has not asked him what it was.

Q. Do you know?

THE WITNESS: State the question again please.

MR. SHANK: Read the question, please.

(Question read).

THE COURT: This calls for an answer yes or no.

A. Why, myself, no sir; I claimed to ask for a patent on that form just as it is and I got it.

Q. Don't you know as a matter of fact that upon your first application every claim you asked for was rejected by the commissioner of patents?

MR. SHEPARD: We object to that as not the best evidence. The records of the patent office will show that.

MR. SHANK: Well, we have it.

THE COURT: I think he ought to be able to tell.

MR. SHANK: He ought to be able to tell whether it was rejected or not as a fact.

THE COURT: Objection overruled.

MR. COOK: Exception.

Q. Answer the question.

A. That every—

Q. That every claim that you made in your first application was rejected by the commissioner of patents?

The witness testified it was not, that Mr. Reynolds, his attorney, had charge of his application and that he never saw the communications he had with the patent office.

Q. Did you ever sign more than one application?

A. Why, I did, yes.

Q. How many did you sign?

A. I think there was three, if I remember correctly.

Q. Wasn't there four, as a matter of fact?

A. There might have been.

Q. Why did you sign four applications?

A. Mr. Reynolds told me that they would not allow all that we were asking for.

Q. You did have some rejected then?

A. There was some changes made.

Q. You don't know how many were rejected?

A. I don't know what shape he put them in.

Counsel then read the original claims filed with the application and asked witness if he made that application.

MR. SHEPARD: We object to that as incompetent evidence to read from a document of the patent office and ask him whether he did or did not make it. It is in evidence before the Court that he did make it.

THE COURT: This witness testified that he perfected his invention in July, 1908; that he consulted an attorney in March, 1910; that he made no changes in his invention subsequent to July, 1908. Now, it is for the purpose of testing that question that I assume this question is asked.

MR. SHEPARD: I don't think Your Honor catches the point of my objection. Counsel is reading from a certain certified copy of the patent office.

THE COURT: Supposing he asked him the question without reading it. You don't claim he has read it incorrectly, do you?

MR. SHEPARD: No, but Your Honor will indulge me. The counsel is reading from a certified copy that he put in evidence. Now, what is the use of wasting the time of the Court and jury reading that when we have already proved that he made that application?

THE COURT: If it is a question of saving time I think you could have saved time by not making the objection. Objection overruled.

Q. Is that not correct, that you made that application?

A. My letters or application signature will show it; I don't know.

Q. And isn't it a fact that the commissioner of patents denied every one of them?

A. I don't think it is.

Q. Isn't it a fact that you made this application and it was likewise denied?

A. If my signature is there it will show it.

Q. Now, pay attention to this—

THE COURT: You might shorten it by showing the witness the record and asking him.

MR. SHANK: This is a certified copy of the record, if the Court please.

A. I would say if my signature is there I certainly made that application.

Q. Your signature would not be here, Mr. Bassett, because it is a certified copy of the original record and therefore it is typewritten.

THE COURT: That was introduced by the plaintiff and admitted to be correct. There is no question about that. It is a subject for argument later on.

Q. Mr. Bassett, pay attention to this and see if you did not make application for this and it was likewise denied: "An inner mold for forming molded conduits, comprising a series of segments adapted, when assembled, to outline the conduit opening, certain of said segments being adapted to overlap or slide past each other, a restraining band or hoop surrounding the segments, and means for

expanding said segments outward against said band.” Didn’t you make that application and wasn’t that denied?

A. I would like to explain.

Q. Well, answer my question first and then you may explain.

A. If my signature is there it was; I don’t remember.

Q. Don’t you remember whether you made such an application?

A. I don’t remember, no sir, but I say if my signature is there I certainly did.

Q. Do you claim that statement?

A. I depended altogether on my patent attorney for the wording.

Q. Well, do you claim that this statement as set forth in this claim is embraced within your patent?

A. I think it is.

Q. It is, notwithstanding the fact that the commissioner denied it?

A. I don’t think he denied it all.

Q. “7. An inner form for molded conduits comprising a series of segments adapted, when assembled, to outline the conduit opening, certain of these segments being placed with their edges entirely outside the adjacent edges of the segment at one side thereof, a restraining band or hoop surrounding the segments and having nothes to form offset inner surfaces to correspond with the offset position of said segments, and means for expanding said seg-

ments outward against said band.” Did you make that application?

A. If my signature is there, I did.

Q. And wasn’t that denied by the commissioner of patents?

A. I don’t think so.

Q. Do you claim it now within your patent?

A. I claim it just what I claimed in the beginning; the model shows what I claimed and—

Q. Well, do you claim that this specification which I have read is an essential part of your patent?

A. I claim it is one of them.

Q. One of the essential parts. Well, listen to this specification and see if you did not make this and was not this likewise denied by the commissioner of patents: “An inner form for molded conduits comprising longitudinal segments adapted to outline the invert, other longitudinal segments adapted to outline the remainder of the conduit, the segments of the two sets at the point of meeting being, one nearer the center than the other, whereby they may overlap when setting up, a restraining band or hoop surrounding said segments, and means for keying the segments outwards towards the restraining band.” Do you claim that as a part of your patent?

A. Yes sir.

Q. And that is the very thing that gives peripheral motion, is it not?

A. That is one of them.

Q. And that the commissioner of patents disallowed, didn’t he?

A. I don't know that he did.

MR. COOK: I object to that. He did not disallow it. These claims were amended, but never rejected. They were amended to come within the purview of patent law. The elements were granted in the final application.

THE COURT: That is a question of law.

Q. Mr. Bassett, I direct your attention to claim 9: "An inner form for molded conduits, comprising segments adapted to outline the conduit opening, said segments having an outer lagging or skin and transverse ribs, the lagging extending beyond the transverse ribs at one end and the ribs extending beyond the lagging at the other end, whereby the ribs and segments of a completed section will directly engage and support the segments and ribs of the section which is being molded." Isn't that the very thing that you referred to here?

A. Yes sir.

Q. And that was submitted to the commissioner of patents and he rejected that, didn't he?

A. I don't think he did.

MR. SHEPARD: He did not reject anything. He required us to amend. It is immaterial.

THE COURT: The record will show what was done. He is merely asking this witness what he knows about it. He is the inventor.

Q. Were you ever shown the opinion of the examiner?

A. I don't think I was; I may have; if I was I don't remember it.

Q. Don't you know that under date of May 12, 1910, the United States commissioner of patents rejected claims 1 to 4 upon Barnett, number 628,382, July 4, 1899; claim 5 was rejected upon Barnett, cited, and Morris numbered so and so; claim 6 and 7 were rejected upon Barnett and Boswell; claims 8 and 9 were rejected upon Barnett and Dooley; and claims 10 and 11 may be allowable." Isn't that a fact?

A. If the record shows it is, yes sir.

Q. Then you don't mean to say that 9 out of your 11 claims were rejected, do you?

A. I don't think they were; the fact is that the invention I have patent letters on is just exactly what we have there; the wording of these applications I left wholly to my attorney and he told me—

Q. Well, isn't that what the examiner called it—rejected? That is the word he used, didn't he? Isn't that a fact.

A. According to that report.

Q. Then subsequently you made another application and tried to make an amendment, didn't you?

A. There was three or four applications made, yes sir.

Q. Didn't you then make an amendment and try to get your patent upon that?

A. There was no amendment made to the form whatever.

Q. There was no amendment made?

A. No sir; the form never was changed, the design for it.

Q. Did you use the same drawing all the way through?

A. The same drawings.

Q. And you didn't use the same language of description all the way through, did you?

A. That was up to my attorney.

Q. I am asking you a question?

A. I did not, no.

Q. But your attorney did not, did he?

A. Evidently he did not.

Q. And then there were some of the second application that were rejected, were there not, which second application contained 5 claims, did it not?

A. I don't remember how many.

Q. And the commissioner of patents rejected claims, 1, 2, 3 and 4 of that application, didn't he?

A. If the record shows it, he did.

Q. Isn't that a fact; don't you know it to be a fact?

A. I don't know it to be a fact, no sir; I couldn't state; I never did know just what numbers were rejected.

MR. COOK: I want to make one objection.

RE-DIRECT EXAMINATION.

The witness testified on RE-DIRECT EXAMINATION that he employed attorney H. L. Reynolds to take charge of his application for a patent and he prepared a sketch of his invention for him, and was not present when the communications from the patent office were received by his attorney, and consequently knew very little of the procedure con-

nected with his application. He then took the patent and pointed out to the jury the elements embodied in claim 1 and 5 which he considered were infringed by the defendant.

Q. Now, Mr. Bassett, before proceeding to 6 let us explain about this interlocking engagement. The interlocking that is referred to here in 5 whereby interlocking engagement between segments may be obtained is produced by the—

A. It should have been produced by those—

MR. SHANK: Now, if the Court please, I don't want to object to anything that has not already gone in, but I submit that this matter, this interlocking matter, has been gone over at least twice.

MR. SHEPARD: It has not been gone over at all by us, Your Honor.

THE COURT: Proceed. I said I would permit you to examine him on it.

(Further discussion.)

Q. Explain to me what is meant by this interlocking under number 5, the interlocking engagement.

MR. SHANK: Do I understand that you are referring to a model in which you seek to show what that interlocking engagement is?

MR. SHEPARD: Yes.

MR. SHANK: The witness has already testified that the model does not contain the interlocking engagement.

MR. SHEPARD: The witness is my witness now, Mr. Shank. Permit me and I will examine him.

MR. COOK: The interlocking engagement that is omitted by that model is not covered by claims 1, 5 and 6; therefore it was not necessary to show it in that model; the element that the defendant's counsel is speaking of is pointed out in claim 2, which is omitted in claim 5.

THE COURT: I understand he has testified twice now that he does not claim they are infringing the interlocking device mentioned in number 5.

MR. COOK: No, it is mentioned in No. 2.

THE COURT: It is also mentioned in No. 5.

MR. SHEPARD: No sir, it is not mentioned in No. 5.

THE COURT: Do you want to explain the difference?

MR. SHEPARD: We want to explain the difference.

THE COURT: The portion as to the interlocking engagement in No. 5.

Q. Now, what do you say is the interlocking produced under claim 5?

A. As I understood it it was this interlocking of ribs. Let me read claim 5.

MR. SHANK: If the Court please, I object to that for the reason that they do not claim that we are infringing anything in claim 2.

MR. SHEPARD: For that very reason we propose to explain the model that counsel has criticised, the model and—

THE COURT: Yes, you may bring that out.

MR. COOK: They have confused the model and

claim 5, and we do not claim that interlocking engagement is mentioned in claim 5.

THE COURT: You can clear that up.

The witness then proceeds to explain the difference between the interlocking engagement referred to in claim 2 and the interlocking engagement referred to in claim 5.

H. L. REYNOLDS, called as a witness on behalf of the plaintiff, being first duly sworn, testified as follows:

DIRECT EXAMINATION.

BY MR. SHEPARD:

Q. Mr. Reynolds, you live here?

A. I do.

Q. What is your occupation or profession?

A. I am a patent attorney.

Q. And how long have you been engaged in that pursuit?

A. As examiner in the patent office and patent attorney for about 24 years.

Q. Have you ever been employed in the patent office of the United States in any professional or official capacity?

A. I was an examiner in the United States patent office at Washington, D. C. for a period of between two and one-half and three years.

Q. State whether or not you have had professional training or education as a mechanical engineer?

A. I graduated as mechanical engineer from the University of Illinois before going into the patent office.

Q. In the patent office what line of patent applications fell to your duty to examine if any particular line?

A. Mainly the line of sewing machines.

Q. Well, was it in the line of chemical, electrical or mechanical?

A. No, it was mechanical lines.

The witness then testified as to the procedure in the patent office.

Q. Did you prepare this patent application?

A. I did.

Q. Did Mr. Bassett prepare any part of it?

A. No part whatever.

Q. He simply stated to you his invention and left it for you to draw the papers; is that it?

A. He explained to me what his invention was, how it operated, and what he wished to get a patent upon; on that information I prepared the application and filed it.

Q. State whether or not you had correspondence with the department afterwards on that subject?

A. I think it was probably three or four times I had correspondence relative to the prosecution of the application.

MR. COOK: Was there ever a new specification substituted.

THE WITNESS: No sir.

File wrapper and contents of patent 990417, admitted in evidence and marked Plaintiff's Exhibit "7".

Q. First, Mr. Reynolds, state to the jury what change, if any, was made in the specifications from your original form.

A. The only change that was made—

MR. SHANK: The document speaks for itself, if Your Honor please.

MR. SHEPARD: If Your Honor please, I would like to have the witness point out the change, if there is any.

THE COURT: Well, is the document long and complicated?

THE WITNESS: If Your Honor will permit me, I can do this in a few minutes and show the jury exactly what changes were made.

THE COURT: Are your changes shown in there?

THE WITNESS: They are in red ink.

THE COURT: I think it will speak for itself.

MR. SHEPARD: We are seeking to do it to enlighten the jury on the subject.

THE COURT: You can do that by argument.

MR. SHANK: The matter as to what may have been done is all recorded here absolutely.

THE COURT: Objection sustained.

MR. SHEPARD: Yes, but it is a matter of comparison. Now, Mr. Bassett has been cross examined at great length with reference to these changes.

THE COURT: The object of Mr. Bassett's cross examination was an entirely different matter.

MR. SHEPARD: I want to show what these changes were.

THE COURT: The instrument will speak for

itself. You can read it to the jury and comment on it when you are arguing.

MR. SHEPARD: Does Your Honor—

THE COURT: I will sustain that objection.

MR. COOK: I except, Your Honor.

THE COURT: Exception allowed.

MR. SHEPARD: We understand that Your Honor does not allow the witness to explain those differences in these claims.

THE COURT: As I understand, under the concession of counsel, the difference in the claims are set forth in that record.

MR. SHEPARD: Yes, they are, but Mr. Bassett was examined as to the changes.

THE COURT: I have stated three or four different times the reason Mr. Bassett was examined went to an entirely different matter; it went to whether or not he had made any changes subsequent to July, 1908.

MR. SHEPARD: That is changes in his invention?

THE COURT: Changes in his invention.

MR. SHEPARD: But here were changes in the claims of the patent.

THE COURT: I don't know how you can get them in any more intelligently than they are already there.

Q. Mr. Reynolds, will you please show the difference in the first claim as originally drawn and in the first claim as finally allowed?

MR. SHANK: I object to that because the record speaks for itself.

THE COURT: Objection sustained.

MR. COOK: Exception.

Q. State whether or not the application was denied in toto.

MR. SHANK: I object to that as the record speaks for itself.

THE COURT: Assuming that that is the case, that the record does speak on all these matters, the objection will be sustained.

MR. COOK: Exception.

Q. State whether or not any changes were made in the original drawings?

A. From memory I should say no.

MR. SHANK: Just a minute. I object to that, as the record itself is the best evidence.

THE COURT: If the record is what it is represented to be here the objection will be sustained.

MR. SHANK: I will state to the Court that the record contains every item of information of the patent office with reference to this claim, it is the file wrapper and contents.

THE COURT: I don't know how you can prove it any stronger than by the record then.

(Further discussion.)

THE COURT: I don't know how many times you gentlemen want to argue this question. Now, the Court has ruled on it and I don't want to hear any more from you.

Q. Point out the difference between the specifi-

cations in the original application and the specifications in the patent as granted.

MR. SHANK: I object to that as the documents speak for themselves.

THE COURT: Objection sustained.

(Further discussion.)

MR. COOK: Exception, Your Honor.

THE COURT: Exception allowed. I asked you originally if this was a long, complicated process. Sometimes an expert, where there are a lot of books and something like that, can go through and state the result.

MR. SHEPARD: That is what I am trying to get at. I am trying to get an expert—

THE COURT: You said it was not. On that theory I assumed that the jury could read it themselves or you could read it and argue it.

Q. Does the file wrapper and contents by the certified copy in your hands contain the claims of the original application?

A. It does.

Q. Point out the differences between those claims and the claims in the patent as granted.

MR. SHANK: Objected to as incompetent, irrelevant and immaterial.

THE COURT: Objection sustained.

MR. COOK: Exception.

THE COURT: You can point that out, Mr. Shepard, in your argument. There is no dispute on the question. It is conceded as a matter of record.

Q. Take up claim 1 in the patent as granted and

explain to the jury what are the elements of it and wherein the forms as used by the defendant differ and wherein they agree with the plaintiff's forms. If you desire, you may stand here immediately in front of the jury and explain the models to them.

A. I will then state that the longitudinal segments adapted to outline the invert are herein lettered 4 and 5; the other longitudinal segments adapted to outline the remainder of the conduit are numbered 3 and 2; the restraining band adapted to surround and locate said segments is the band which is lettered 1. (Continuing reading) "and having its inner edge recessed to hold the invert segments enough farther from the center than the segments adjoining to permit the edges of the latter"—that is of the segments adjoining—"moving peripherally within the invert segments, and means for peripherally expanding those segments above the invert." Now, the model in question has the segments adjacent to the invert segments, being the segments 3, located inside of the invert segments, that is capable of moving over nearer the center, and the means for expanding these segments shown are wedges which are driven at this point to expand the thing around; the term "peripheral" as used here, it simply means in the direction of the circle or curve; it expands it out this way and in doing so closes the joints.

Q. State whether or not in your opinion as a mechanical and patent expert, the defendant's forms used in the tunnel, in the sewer, which you saw and illustrated by this model, does or does not use—

did or did not use all of the elements contained in the claim No. 1?

A. It contained every one of them; some of them in their size might not have been the same, but that is only a question of dimension and proportion.

Q. As they used them was this circle marked “79”—or nearly a circle; not quite a complete circle—a solid piece or was it in more than one piece?

A. I cannot say positively as to that, but my impression is very strong that it was in two pieces, the cut being on the center line.

Q. Why wasn't this model made with those pieces made solid instead of those pieces cut apart?

A. Well, the claims upon which I understood the patent to be infringed made no mention whatever of any construction of that sort and consequently the question of infringement could not be affected in any way whatever whether that was cut or not cut.

Q. That was merely a matter of convenience in making the model, was it?

A. That is all.

Q. It is not intended to represent that they used just that form of the inner circle?

A. Not in the least.

Q. Now, you will please take up the second claim for the purpose of explanation with reference to this interlocking device that has been mentioned on cross examination of Mr. Bassett.

A. Claim 2 I believe is one which is not claimed to be infringed.

Q. We do not claim it to be infringed in this action, but I want it explained for the purpose of showing the difference between that and No. 5.

A. I will read claim 2: "An inner form for molded conduits comprising a series of segments adapted to be assembled to act as an arch"—that including the general arch feature—"and outline the bore of the conduit, the segments of adjacent sections having complemental projections and recesses adapted to interlock to prevent displacement both radially and peripherally, a templet or rib adapted to surround the outer ends of the segments of a section to restrain them against outward movement, and also to form an end wall for the mold." Now, this claim says: "The segments of adjacent sections"—that would be a section here and a section here coming consecutively in the length of the tunnel—"having complemental projections and recesses adapted to interlock to prevent displacement both radially and peripherally." Now, this model shows that the transverse ribs at the end are arranged so that at one end of the segment the ribs project beyond the outer lagging, while at the opposite end the same segment has the lagging projecting beyond the rib, which causes an interlocking to prevent displacement in a radial direction.

MR. COOK: That is not shown in this.

THE WITNESS: That is shown in this one. Now, in addition, the Bassett device as shown—

Q. Explain in what you mean by radial direction.

A. From the outside towards the center of the circle?

Q. So the two adjacent sections could not move on each other that way?

A. Could not move from the center inward or outward. Now, the construction shown in the Bassett method had a feature which is not shown on this model, namely, these longitudinal ribs which are at the edges of each segment of the form were so cut that at one end they drop back from the face of the transverse rib while at the other end they project out a corresponding amount, and when they interlock of course we prevent a displacement in a peripheral direction. Now, there are two forms of displacement that are included in that claim, the radial displacement and the peripheral displacement, the two movements being exactly at right angles.

Q. In which claim?

A. Claim 2, the one which is not claimed to be infringed, as I understand it. Now, that is what that displacement is.

Q. Now, take up claim 5.

A. Claim 5 reads as follows: "An inner form for molded conduits, comprising longitudinal segments composed of outer lagging and ribs secured thereto,"—those can be seen by inspection—"adapted to be"—no, that is wrong—"said ribs including"—

Q. Read from the very beginning.

A. (Reading) "An inner form for molded conduits, comprising longitudinal segments composed of outer lagging and ribs secured thereto, said ribs in-

cluding transvers ribs at each end,”—that said ‘including’, not consisting of solely, but including among them.

Q. Show them; point them out.

A. They are hereon lettered “21”. (Continuing reading) “the transverse rib at one end projecting beyond the ends of the lagging and at the other end the lagging extending beyond the rib,”—in other words—

Q. Show it here.

A. As shown there, making a recess.

(Continuing reading) “whereby interlocking engagement between segments may be obtained, said segments also having longitudinal ribs at their side edges adapted to engage those of adjacent segments to form an arch,”—it is evident how that occurs.

Q. Show the longitudinal ribs.

A. They can be seen by looking inside.

Q. You mean turn it around?

A. Yes sir, that is better; you can see the longitudinal ribs there at the edge of each segment. (Continuing reading) “an independent, radially extending rib surrounding the outer ends of the segments”—being the part herein lettered “1”—“and acting as a restraining band and a temporary end wall for the mold section”,—that is, it has two functions, that of a restraining band and mold wall for the end of the conduit.

Q. Which is the independent, radially extending rib?

A. The rib or hoop, as you might call it, which is

lettered "1". (Continuing reading) "and means for expanding the segments peripherally against this band." The means, the expression being in that broad term, would cover any kind of means which might be used.

Q. Point out on this model what are the means that are used for that purpose.

A. The means used for that purpose as shown on this model are the wedges which are lettered "13."

Q. What is the function of the circle "78" and "79"?

A. That is as a center to hold the segments in correct position while being set up and afterwards.

Q. State whether or not that circle is any part of the means for peripherally expanding these segments?

A. The outer circle 1.

Q. No, the inner circle.

A. The inner circle 79?

Q. Yes. Is that any part of the means for holding the lagging or the segments in position?

A. It is a part of the means for holding the lagging or the expanding of the lagging, which would be done in connection with that or with the assistance of that would be the radial expansion, not the peripheral.

Q. Yes, I understand.

A. Now, in claim 5 here there is a reference to interlocking engagement. Now, as I have said before, in reference to claim 2, there are two kinds of interlocking engagement, one the interlocking

engagement due to the recesses which extend across the whole length of the segments and which act in a radial direction to prevent displacement in a radial direction; the other is a peripheral displacement which is prevented by the extension and recessing of the longitudinal ribs of the segments. Now, in claim 5, the interlocking engagement here, the claim reads this way: "the transverse rib at one end projecting beyond the ends of the lagging and at the other end the lagging extending beyond the rib", then follows, "whereby"—that is, because of such construction—"interlocking engagement between segments may be obtained,"—now, that interlocking engagement is the radial interlocking and not the peripheral interlocking.

Q. By means of the other model, Exhibit "4", explain to the jury in what respect under claim 5 the defendant's device differs from the plaintiff's device, and in what respect it agrees with it.

A. Plaintiff's device, instead of having a—what might be called a circular arch, instead of the posts and bars used by the plaintiff to support the segments while being set up and afterwards, the defendant uses this hoop like or half ring construction, being the form of construction which has been used for a long, long time when an arch was to be made. Now, claim 5 in reference to that feature simply says—no, claim 5 does not say anything about that feature; it does not include that feature at all. It does, however, say: "means for expanding the segments peripherally." That is in the direction of the

circle, not in the direction of the radius, as these posts 8 of the plaintiff's device would do, and consequently it does not refer in any sense either to the posts 8 of plaintiff's device or the two hoops or half hoops, arch braces, of defendant's device, but rather to the wedges.

MR. SHANK: 13, that is?

THE WITNESS: 13. Which are used in both forms of construction.

Q. Now, does claim one contain any expression that indicates either of these inner devices in the one model and not the other?

A. Claim one contains no elements which can be construed in any way as meaning any of this mechanism used for holding the segments outward, but only means for peripherally expanding those segments above the invert, the peripheral expansion being at right angles to the other.

Q. Now, proceed to claim six and trace out the elements of that combination on the models.

A. Claim 6 reads: "An inner form for molded conduits, comprising segments adapted to outline the invert,"—said segments being on the models lettered 4 and 5—"one of said segments being removable inwardly,"—that would be the segment 5 of the Bassett construction and the narrow strips or invert key bars which in the model representing defendant's exhibit are lettered 22.

Q. There are some here lettered 23. Does that include them too?

A. No. (Continuing reading) “a restraining member surrounding the segments and having an off-set outline at the edges of the invert section,”—the same being lettered 1 in each model and being identical in construction—“whereby the adjacent segments”—that is the segments adjacent to the invert—“may slide one over the other,”—that is the adjacent segment may slide, the adjacent outer segment may slide over the adjacent inner segment—“transverse sills spanning the invert segments”—being the parts numbered 6 in both cases—“and serving as an abutment for the other segments, and means for keying the segments outwardly from said sills against the restraining member”, said means being the wedges which have been lettered 13 in both models. Those elements were all of them contained in the defendant’s device as I saw it in place in the tunnel, the principal difference being that the segment of the invert which was adapted to be removed inwardly was made probably not over three inches wide, while in the plaintiff’s device that segment was made of some considerable width, the exact width I don’t know, but probably 16 to 18 inches, depending on the size of the tunnel.

Q. Now, state whether or not the defendant’s device, as you saw it in use in their tunnel or sewer contained anything corresponding to this circle or nearly a complete circle?

A. Instead of the posts 8 as employed by the plaintiff the arch or hoop like construction lettered 79 in the exhibit of this model was employed.

Q. How about this lower solid piece?

A. There was a piece placed across the top of the invert similar to part 6 of the model, and the invert sections were keyed or held downward against that.

Q. What if anything, is the expression in claim 6 which refers to these same structures in the two models, the radial bracing posts in the plaintiff's model and the circular in the other model, claim 6?

A. Claim 6 contains no reference to any part of that construction which is inside of the segments which carry the lagging excepting as it refers to the transverse sills spanning the invert and means for forcing the segments outwardly.

Q. Means for keying the segments outwardly?

A. Means for keying the segments outwardly from said sills.

Q. That means for keying the segments outwardly comprise those structures?

A. That means for keying the segments outwardly would be wedges 13.

Q. Mr. Reynolds, state whether or not in your opinion as a mechanical and patent expert, the differences that you have pointed out here in the structure of the invert and in the lower part of the circle in the model 6, Exhibit "6", are or are not mechanical equivalents for the corresponding parts in the plaintiff's model No. "4"?

A. They are the simplest and most obvious kind of mechanical equivalents; anybody would know that that segment which could be removed in-

wardly and which may be called an inverted key-stone might be made three inches wide or it might be made twelve inches wide.

Q. How about these parts that are solid in exhibit "6" in the lower part of the circle and the one that simply has a cross brace, a horizontal bar, and two supporting posts in exhibit "4"; what is your opinion as to that?

A. Well, they are both of them in the nature of blocks to withstand a strain, and whether that block is made—

Q. State whether or not one is the mechanical equivalent of the other?

A. They are identical so far as that goes, so far as being mechanical equivalents; it makes no difference whether the block is long or short.

Q. What is the function performed by each?

A. Simply to hold down the invert segments, keep them from rising then the concrete is placed under them; when the concrete is placed under those segments there is a tendency to lift, and if they are not held down they will come up.

Q. State whether or not in your opinion there is or is not any mechanical equivalents in the system of bracing or holding the parts outward in the one by means of a circle in exhibit 6 and the other by means of those radial bars or posts in exhibit 4?

A. It is well known to every mechanic that that sort of posts may be used to support an arch or you can frame an arch for the same purpose, they are strictly mechanical equivalents, and further—

more the claims in issue say nothing about that construction how it is made, do not make any reference to it, so whether they were mechanical equivalents or not would not make any difference.

CROSS EXAMINATION.

BY MR. SHANK:

Q. Mr. Reynolds, you say that claim 5 is an interlocking of the segments radially?

A. I do.

Q. Why didn't you describe that as the interlocking of the sections radially; that is what it is, isn't it?

A. No sir, it is not, and the term section, here is a section, this in its entirety is a section and this is a section, when that is put into use they are put up separately as segments and the segments altogether form the section.

Q. Yes, but there is nothing to prevent the peripheral motion by that interlocking device, is there?

A. There is nothing—

Q. Answer my question.

A. There is nothing to prevent peripheral motion by reason of that particular interlocking.

Q. That is the point. Then why didn't you describe that as an interlocking of the sections instead of an interlocking of the segments?

A. Because I thought the other was a more correct form of expression.

Q. You made your drawings to show that interlocking of the segments, didn't you?

A. I did.

Q. And your description has followed your drawings?

A. It has.

Q. But when you speak about the interlocking of the sections here according to these models you speak about that interlocking that will permit a peripheral motion of those two sections, don't you, but will prevent a motion radially of the two sections, not of the two segments?

A. The interlocking as referred to in claim 5 refers to that form of interlocking.

Q. Answer my question?

A. I think I have?

Q. The interlocking of those two sections is an interlocking of the sections radially and not an interlocking of the segments radially, isn't it?

A. Yes, it is an interlocking of the segments radially; of course the segments as considered altogether of the section and you might say it was an interlocking of the section also after it is complete.

Q. How is it an interlocking of the segments radially? (Counsel placing two models together.) Can you put those two together?

A. Turn the other one around also; if you turn one you have to turn the other.

Q. Well, I don't believe it; aren't those the two ends that go together?

A. You are not a sewer man.

Q. They are not? Don't they go together? Of course I am right about it and I am not a patent expert either. Isn't that correct?

A. Yes sir.

Q. Don't they go together?

A. I think you turned one around.

Q. Of course you think I did, but I did not. I had them just the same way. Now, what is there to prevent your having described that as an interlocking radially of the sections instead of an interlocking of the segments?

A. I suppose I could have said sections and still been well within the truth.

Q. Well, why did you describe it in your patent, your figure 2, and make it an interlocking of the segments?

A. For this reason: one of the chief reasons for that is to hold those segments in place while the section is being assembled; after the section has been assembled there is not so much need for it, and I doubt if there is any need for it; the need for that comes in the assembling of the segments.

Q. Why didn't you make these models that you had made with the interlocking device to interlock peripherally that you described in your figure 2 contained in your patent?

A. For the very good reason that that feature is not mentioned whatever in the claims which are being sued upon.

Q. What is that again?

A. I said for the very good reason that that feature is not involved in any of the claims that are being sued upon.

Q. It is involved in 5, is it not?

A. It is not, most decidedly not.

Q. What is this description: "Also, the ends of the longitudinal ribs project half the thickness of the transverse ribs at one end and terminate at the center line of the transverse ribs at the other end, whereby the ends of the segments of adjoining sections interlock to secure exact registry and to prevent peripheral displacement." That is in the patent. I read exactly from your own language.

A. Yes sir, the counsel read not from the claims, but from the specifications.

Q. Why, certainly I did, but aren't the claim explained by the specifications?

A. The specifications—

Q. I am asking you a question. Answer my question.

A. I will answer your question if you give me a chance.

Q. Just a minute.

A. The claims must be considered each by itself and the meaning of the terms in each claim is to be taken, where there is any doubt in it, from the explanation given in the specification.

Q. Then you interpret every claim by the specification, don't you?

A. Where there is any doubt as to its meaning;

claim 5 is perfectly clear and distinct in its meaning.

Q. Then that you did have some specifications in your application is an implied fact to indicate that there was some doubt about your claims, wasn't there?

A. No sir, in no sense whatever.

Q. Then why did you put in your explanations?

A. Well—

Q. Answer the question; why did you put in the explanations?

A. The patent office requires—

MR. SHEPARD: We object. That is a question of law.

THE COURT: I think so.

MR. WITNESS: I am perfectly willing to answer it.

MR. SHANK: What was that?

THE COURT: I think that is a question of law.

MR. SHANK: Well, this is an expert here, who has—

THE WITNESS: I am willing to answer it.

THE COURT: All right. The objection is withdrawn. Go ahead and answer it.

THE WITNESS: I will answer with the understanding that I must say enough to make it clear and just what I mean.

(Question read.)

Q. Why did you put in your explanations if you say that the claims are interpreted in the light of

the explanations only when there is a doubt about what the claims contain?

A. That statement was put into the specification for the reason that the patent office requires a full explanation in the specifications of the construction and operation of the parts and they require explanation and illustration of whatever may be necessary that is not patentable, in order to clearly show the relationship of the patentable features with the others—

Q. Why did you—

A. And for another very good reason, that there are claims in this patent which refer to a claim with peripheral movement outside of claims 1, 5 and 6 which are being sued upon.

Q. Now, in your figure “Q” you put in a drawing showing engagement of these transverse ribs, didn’t you, or these longitudinal ribs?

A. I did.

Q. You do not show that in your models, do you?

A. No, for the reason it was not infringed so far as I knew and—

Q. But you did put it in the models that you introduced in evidence before the United States Commissioner, Mr. Bowman, in the case of Bassett against the Colson Construction Company, didn’t you?

The witness stated as he had previously testified that both interlocking features were illustrated in the Colson model. Whereas only one of the interlocking features was illustrated in the model in

this case, and the reason why he omitted disclosing the interlocking feature referred to in claim 2, was due to the fact that claim was not mentioned as one of the number infringed.

Q. Mr. Reynolds, you have been an examiner in the patent office I believe you stated?

A. I have.

Q. Don't you know that the use of concrete and cement is pretty nearly as old as civilization?

MR. SHEPARD: We object to that as immaterial. That has nothing to do with the patent, whether the use of concrete is old, or brick, or the method is old.

THE COURT: He can't prove his case all at once. That is preliminary. Objection overruled.

A. That is a matter of common knowledge, that the use of concrete is old.

Q. In your specifications you say: "The object of my invention is to provide a form or mold which may be used to shape the inner surfaces of conduits". There is nothing new about conduits, is there?

A. No, there is nothing new about conduits—

MR. SHEPARD: Objected to as immaterial.

Q. I am asking you a question. Conduits are likewise as old as civilization, aren't they?

A. Yes sir.

Q. (Continuing reading) "which are made of such materials as cement,"—that is likewise as old as civilization, isn't it?

MR. SHEPARD: We object to that as immaterial and irrelevant.

THE COURT: Mr. Shepard, these are merely preliminary questions, as I understand the object of counsel, and the objection is overruled.

MR. SHEPARD: Exception.

Counsel then asked witness as to whether concrete, bricks, sewers were not old, and witness answered yes.

Counsel then handed witness a copy of Barnett patent and asked him to state if that was a copy similar to the one he received from the patent office, and if he had it in his possession at the time the commissioner of patents rejected his first nine claims and allowed the last two.

MR. SHEPARD: I object to that as immaterial, irrelevant and anticipating the defense which has been specially pleaded.

THE COURT: I don't think it is for the purpose of showing the circumstances of this patent. I don't think that is the object of the testimony at all. Objection overruled.

MR. SHEPARD: Exception.

Witness then testified that he did not have the copy in his possession at the time as he had no opportunity of knowing anything about it, but that he got it afterwards.

Q. And you got this before you made your second application?

A. I didn't make any second application.

Q. You didn't make any second application?

A. No sir, I did not.

Q. What did you do?

A. I amended the present application. Amendment does not change an application; it simply corrects.

Witness then testified that he re-drew certain of those claims to make them conform to the ideas of the examiner, and that he had a copy of Barnett for consideration.

MR. SHANK: I offer this in evidence. I spoke to counsel about several of these copies, Your Honor, that I have here, that we have just one copy, and the testimony in an equity case to be taken at the close of this case, and we shall want to use these. I will get from the patent office other copies and put in in place of these. I understand counsel will consent to this.

MR. SHEPARD: If it is a mere matter of accommodation in substituting one document, an identical document, for another, I have no objection to accommodating counsel, but we object to the introduction of this instrument in evidence for two reasons: first, it is immaterial and irrelevant to the matter now before the Court; second, it is anticipatory of the defense because this is one of the documents—it purports to be a copy of one of the patents which has been specially pleaded in defense; in the third place, this is not an official copy, it is not certified; it is a printed document, and so far as anything before the Court shows, might have been printed in a printing office here in this city;

there is no evidence that it ever came from the patent office.

THE COURT: What is your object in offering this?

MR. SHANK: The object, if the Court please, is to bring to the attention of this examiner and this expert the status of the prior art at the time they were developing these ideas. It must be apparent to Your Honor—

THE COURT: It is not for the purpose of proving that this patent was an official patent.

MR. SHANK: Not in the slightest in the world. In other words, he had this information in his hands, no matter in what form it comes.

THE COURT: For that purpose it will be admitted. Objection overruled.

MR. SHEPARD: Your Honor admits it?

THE COURT: For the limited purpose for which it is offered.

MR. SHEPARD: It is an uncertified copy.

MR. SHANK: It goes in with that reservation.

MR. SHEPARD: Your Honor will grant me an exception.

Copy of patent referred to admitted in evidence and marked Defendant's Exhibit "A".

The witness was then asked if he had investigated Morris, No. 837328, dated December 4, 1906, being the patent upon which the commissioner rejected claim number 5. He answered that from an inspection of the copy it was the one he had in his possession at that time.

MR. SHANK: I offer this in evidence.

MR. SHEPARD: I object to that for the same reasons—

THE COURT: The same offer as the last?

MR. SHEPARD: For the same reasons as before, Your Honor.

THE COURT: Same ruling as before.

Copy of patent referred to admitted in evidence and marked Defendant's Exhibit "B".

The same question was asked of Boswell patent No. 870269, and was admitted in evidence and marked Defendant's Exhibit "C", likewise Dooley, No. 910076, admitted and marked Defendant's Exhibit "D", likewise Naas, No. 209976, admitted and marked Defendant's Exhibit "E", likewise DePaolis, admitted and marked Defendant's Exhibit "F", (exception noted and allowed to the plaintiff.)

Q. That was after the second rejection, wasn't it, of certain claims?

A. It seems to me the best testimony of that is the record itself: I can't be expected to remember all those details at this length of time; I judge it probably was.

Q. Did you make another application?

A. I did not.

Q. Or another amended application?

A. I did not make another amended application; I amended that application.

Q. You amended that application?

A. That particular application.

Q. At the time you made your original application and each subsequent amendment thereto you knew as a matter of fact that you were not using a single new element in your combination, didn't you?

MR. SHEPARD: I object to that as immaterial.

THE COURT: Objection overruled.

The Court then instructed the witness to answer the question yes or no and explain afterwards if he wished to.

A. Yes, I knew that the elements considered alone were not new, but the combination was the point what was being patented, the combination of these old elements.

Q. Now, let us have the combination. Do you claim that the combination of segments was new?

A. I can't conceive of a combination of segments alone.

Q. Answer my question. Do you claim a combination of segments is new?

A. Certainly not, because there is only one element in that.

Q. Do you claim a segment is new?

A. No, that is a single element and a single element cannot be patented that way.

Q. Do you claim that invert is new?

A. No, not as an invert.

Q. Do you claim that this templet was new?

A. Not considered alone by itself, no.

Q. Have you seen a cooper construct barrels, haven't you?

A. I have.

Q. Is there any difference between the combination of that template and these segments and the combination of a barrel and the hoops on it?

A. Yes, a great difference.

MR. SHEPARD: I object to that, if Your Honor please.

Q. There is a great difference?

A. Yes sir.

MR. SHEPARD: The combination is not of two or three elements, but the whole combination named in the claims.

THE COURT: Well, he is an expert.

Q. You don't claim that there is any novelty in the combination of this bracing, do you?

A. No, but that was not your question.

Q. That is my question now. You answered the other one, didn't you? Did you get through with the answer?

A. I said it was not like that of an ordinary barrel.

Q. I would like to have you state to this jury and to the court what a single solitary element there is in that construction that an ordinary carpenter, taking that blueprint, could not have gone upon the job and constructed there and could not have constructed anything else?

MR. SHEPARD: We object to that as immaterial and irrelevant, as not addressed to the issues before the Court.

THE COURT: Objection overruled.

A. That is a question that is impossible for me to answer for the reason that I have never seen those blueprints.

(Counsel for the Defendant produced blueprint.)

MR. SHANK: I ask to have this sheet No. 14, blueprint, marked for identification.

Blueprint referred to marked defendant's Exhibit "G" for identification.

Q. I refer you, Mr. Reynolds, to Defendant's Exhibit "G" for identification, and direct your attention particularly to the forms there exhibited, varying in size only, but apparently all the same kind, and for convenience I will refer to the larger one of them, which is in the upper left hand corner and ask you to state to this jury whether, assuming that the plaintiff had a similar construction to make along similar plans, an ordinary carpenter could not have made the same thing in order to produce the result which you have here stated that you sought to accomplish?

MR. SHEPARD: We object to that as immaterial and irrelevant and also for the reason that this blueprint has not been shown what its source was, who made it or when it was made.

THE COURT: He is not trying to prove about the authenticity of the blueprint. The objection is overruled.

MR. SHEPARD: Exception.

THE WITNESS: Read the question.

(Question read.)

A. The drawing shows—

Q. You may answer that question yes or no and then you may explain.

A. A carpenter might have done so, but whether he would or not is another question.

Q. Are you familiar with the publication by Reid on "Concrete and Reinforced Concrete Construction"?

A. I think I have seen it.

Q. Have you ever examined it at all?

A. Not in connection with this subject.

Q. Not in connection with this subject, but you know as a matter of fact of this publication, do you not?

A. I believe that there is such a publication.

Q. Would a carpenter (having in possession that book) been able to construct the same plans that you here are claiming to be a novel thing and upon which you have sought an invention?

MR. SHEPARD: We object to that as immaterial and irrelevant. It is not competent to ask a witness by the books.

MR. KERR: That is the test.

THE COURT: Is it conceded when this publication was issued?

Q. See when that was issued, Mr.—

MR. SHANK: Prior to this, Your Honor; it was 1907, and this is a republication.

A. 1907.

Q. That is a new edition, is it not?

A. It don't state here on the title page.

MR. SHANK: All right, 1907.

THE COURT: Objection overruled.

THE WITNESS: What was that number?

Q. 658. Look at that and state to this jury if, with that volume in the hands of any carpenter, he could not have gone upon those works and have produced exactly the same thing here upon which you are claiming a patent?

MR. SHEPARD: I object to that as immaterial, irrelevant and incompetent.

THE COURT: Objection overruled.

MR. SHEPARD: Exception.

A. I see nothing in these to indicate any form of construction for the molds similar to the construction at issue—

Q. Well, does it not contain collapsible—

A. And I naturally would infer that it is not at all certain or evident that a carpenter would have produced that same construction.

Q. Does not that book there in many illustrations contain collapsible forms and give the descriptions as to how it was built and how it can be operated?

A. It shows illustrations of collapsible forms.

Q. And are not those collapsible forms made up of segments?

A. Made up of segments, but none of them of the character of the form shown in the patent.

Q. Yes, but they are segments forming the periphery of the circle within certain templets, aren't they?

A. They are segments forming the inner surface of a conduit—

Q. Yes.

A. But as to encircling I am not so sure; the most of them at least do not show anything of that sort.

Q. The encircling templet; what is that; isn't that a templet, on page 680?

A. There is nothing whatever there to indicate that it is.

Q. Nothing there to indicate?

A. At the bottom where the pencil was directed; there is a templet or bracing at the side evidently extending to the side wall of the trench.

The witness then testified there was nothing new and novel about the templet.

Q. You desire then that we shall understand that every element that you employed there is an old element and has been in use for a long time and you simply claim that the manner in which you have put those segments together and braced them is that which you claim; is that correct?

A. I would answer that by yes providing certain explanations are made, and in explanation I would say this: So far as the various elements considered alone are to be considered in the answer, each of them are possibly old and at least constructions which are similar to them are old, but so far as con-

sidering them as combined together to make a complete whole I do not consider that they are old; I consider that at the time of the filing of this application they were new so far as—to whatever extent my knowledge goes; it is the combination that is new; not the elements considered separately.

Q. I would like to have you step down here before the jury, Mr. Reynolds, if you please. I am referring now to Reid on "Concrete and Reinforced Concrete Construction", and particularly direct your attention to page 661, figure 484, entitled "Center for Jersey City Water Works Conduit", and ask you to state to the jury—just examine it and then I want the jury to see it. Have you examined it?

A. I have.

Q. Now, Mr. Reynolds, I want you to—

MR. SHEPARD: If the Court please, this book is not in evidence and we object to the book being exhibited to the jury as if it were in evidence.

MR. COOK: It has not been pleaded nor has 30 days been given.

MR. SHEPARD: Counsel is holding the book here and showing illustrations in it.

Q. You know this work, do you, Mr. Reynolds?

MR. SHEPARD: He has said that two or three times.

A. I have seen it; I know it to that extent.

THE COURT: There is some reference to the pleadings here.

MR. SHANK: The witness has stated this is

recognized authority on these matters.

MR. SHEPARD: Yes, but that is not in evidence.

MR. KERR: We can use it for illustration, Your Honor.

THE COURT: Where in your answer do you plead the prior publication?

MR. SHANK: It is pleaded there in the answer, if the Court please.

MR. COOK: The date is not given, the date of publication, nor has notice been given.

THE COURT: It is not necessary to give notice if you set it up in the answer. At the top of page 3: "That the same has been described and illustrated in printed publications and patents prior to the date of the supposed invention of the said Henry W. Bassett."

MR. SHANK: Yes, Your Honor, I knew it was in there.

MR. COOK: They must give the name of the publication, Your Honor.

MR. SHANK: I also plead it was in use, Your Honor, as well as the publications.

THE COURT: Where is the statute that you rely upon that requires the citation of the name of the publication?

MR. KERR: All you have to plead is to plead generally; not that you have to plead the name of any particular publication.

THE COURT: They are apparently relying upon some statute I would like to have cited.

MR. SHANK: Yes, I would like to see the statute on that myself, Your Honor; I have never heard of it.

MR. SHEPARD: Section 4920 of the revised statutes as amended by the patent act of 1897, published in 29, statutes at large, at chapter 391, page 692, says the plaintiff may plead and prove, "third, that it has been patented or described in some printed publication prior to his supposed invention or discovery thereof, or more than two years prior to his application for a patent therefor."

MR. SHANK: That is what we claim.

THE COURT: That is what I have here. If that is the only statute you have to cite, the objection will be overruled.

MR. SHEPARD: Some printed publication. They have got to name it.

THE COURT: I ask you for the statute where it was required to be named. Objection overruled, if that is the only statute you have to cite.

MR. COOK: Your Honor, can we get a statute today. I think I have a recent publication.

(Further discussion.)

MR. SHEPARD: Will Your Honor admit the book?

THE COURT: Yes, unless you cite some other statute.

MR. SHEPARD: They have not named any publication. They have not named this book.

THE COURT: The objection overruled. If you have any further authority I will be glad to hear it.

Q. Mr. Reynolds, I refer now to figure 484 in Reid on "Concrete and Reinforced Concrete Construction", of the issue of 1907, at page 661, and ask you to state if that form is not made up of segments.

A. It appears to be made in segments.

Q. Hasn't it a templet or restraining band to hold those segments in place, the same as the templet 1 on plaintiff's model 4?

A. It has a restraining band, but not constructed the same as that.

Q. But it has a restraining band that performs the same function in holding them in place, doesn't it?

A. It performs the same function of restraining them against outward movement.

Q. And it has the cross braces here in the center the same as—it has the restraining braces in the center so as to meet at the joint of each—where each segment joins another?

A. It appears to be that; it is not at the joint; it is close to it.

Q. And it has those same braces across the bottom as shown in Plaintiff's Exhibit "6", has it not?

A. It has braces across the bottom; whether they are just the same or not I don't know.

Here the witness testified that the form of bracing used in Exhibit 6 would sustain a greater weight than his bracing used in Exhibit 4.

Q. Well, what is your judgment; don't they appear to be the same? I am referring to exhibit "6".

A. It seems to be the same so far as the lower brace shows; the upper brace is not quite as straight up.

Q. The upper braces are likewise—are the same as the braces in Defendant's Exhibit "4"?

A. They look very much like them.

Q. Now, as a matter of fact there is no practical difference between the mechanical effect of those two forms, is there?

A. Yes, there seems to be a very important practical difference.

Q. What is it?

A. And that is just this: that in the one case, as shown in the exhibits here, the templet surrounding is recessed to form a support for the off-set segments by which the invert is formed, while the drawing shows nothing of that sort.

Q. Yes, but the only difference is that the templet in the picture shown does not provide for a recess here for an invert to receive the brick, does it; that is all, isn't it?

A. That is the most important difference; whether there are others I am not prepared at the present to state.

Q. You don't see any others, do you?

A. Not at the present moment.

Q. The form as given in here was for a conduit around which would be poured concrete and cement for making the water tunnel, wasn't it?

A. That I believe was the intention.

Q. And the forms which you have produced here are for the same purpose only in this particular instance they were used for making a sewer; is that correct?

A. Correct.

MR. SHANK: I think that is all.

RE-DIRECT EXAMINATION.

Q. How many different kinds of interlocking devices.

A. Two.

Q. Explain to the jury what those two are.

A. One is the form of interlocking that is secured by the projection and recession of the lagging with reference to the bar which extends across the end, the frame bar, so that the segments may be held against moving inward or outward as the case may be; the other form of interlocking is the form of interlocking which prevents what may be described as a twisting movement between the two segments.

Q. What do you call the first kind?

A. That is the radial movement.

Q. What do you call the second kind?

A. Peripheral.

Q. Illustrate it by the two models now on the bench before the jury.

A. The radial interlocking is secured by this projection extending into the socket that is formed in this section by the fact that the lagging of this projects beyond the cross bar, while in this case

the cross bars project beyond the lagging; the two will go together if they are placed in proper position; of course this not being a true circle they have got to be placed in proper position in order to enter; that prevents a movement which would be in this direction, that is in the direction of the diameter of the circle; while the other interlocking is one which will prevent this kind of a movement, that is one turning with reference to the other or a twisting movement as between the two; the two are entirely independent and are secured by different means.

Q. Now, in these three claims in suit here, claims 1, 5 and 6, or in any of them, are or are not both of those kinds of interlocking claimed and covered and if not both then which?

A. In the particular claims upon which the suit is based, that is 1, 5 and 6, only one form of interlocking is included in any one of the claims, that is the radial movement, the movement which is prevented by the lagging extending beyond the transverse cross bar at one end and the transverse cross bars extending beyond the lagging at the other; there are claims there which include both forms of interlocking, but they are not claims 1, 5 or 6, they are other claims.

Q. These models were made by your orders to illustrate or to use in this particular case, were they?

A. They were.

Q. What is the reason that you did not have the models illustrate the other kind of interlocking, that is the peripheral interlocking?

A. For the reason that the device as used by the defendant did not employ that particular kind of interlocking and it was not intended that any claims should be made that the infringement was made of any claims which included that type of interlocking and I did not consider it necessary to illustrate the other feature as it was not a point in this suit.

Q. Did or did you not at any time file a new specification?

A. No.

Q. Or a new application?

A. I did not.

Q. Can you recall to mind any patent in ordinary use, any invention in ordinary use, which is a combination invention and in which all of the elements are old and common?

A. Why, all the elements of practically every patent issued are old; it is the rarest thing to discover a new mechanical element.

Q. Is or is not this a pioneer patent?

A. In a limited extent so far as reference to the provision in regard to the construction of the invert in the manner described it seems to be largely of a pioneer character; in the other and unessential elements of simply using segments and something to hold them it is not a pioneer patent.

Q. Now, the making of tubes and molds of various sizes and shapes, as for instance a circle, an egg-shaped and otherwise, for underground purposes, underground use, is not new, is it, the act of making a mold—?

A. Not at all.

Q. — the constructing of the tubes in that shape? What is the object of this invention, of the combination claimed in this patent?

A. The object of the patent was to protect to the inventor the peculiar form of construction by which certain results were secured, said results consisting mainly of the ability to pour the concrete with the off-set for the later insertion of the brick floor, and to do this in a convenient, practical and simple manner.

Q. Now, the sewer in the form indicated by the city specifications, or what are supposed or said to have been the city specifications, could have been made, could it not, by simply fastening together a lot of boards in that shape?

A. It certainly could and that would be the most natural attempt of the average man.

Q. What would be the advantage of using these forms for molds over simply nailing together or otherwise fastening together a lot of boards into that shape and then molding the concrete over them?

A. The making of the forms by the ordinary method of nailing together the continuous parts thereof would mean that the form would have to

be torn to pieces for reassembling, and in doing so a large percentage of the lumber employed would be ruined and not capable of being reused while if forms were used of such character that they could be readily taken down and reused this continuing charge for new lumber could be very largely avoided.

Q. Would that accomplish an economy of labor as well as material?

A. Yes, it would take much less labor to take down and set up again such forms than it would to remove ordinary nailed up boards and construct new forms in the same manner.

Q. Then, the whole scope of it is to economize labor and material; it is?

A. That is it.

Q. Now, will you please state to the jury, in the light of your familiarity with the practice and proceedings in the patent office, what is the usual course as to amending or what is sometimes called rejecting claims of specifications, claims of the proposed patent?

A. Whenever the examiner upon examination of an application finds anything in it which does not meet in every way with his approval, whether these matters are mere form, such as a correction of typographical errors, or whether it consists of a lack of sufficiently clear explanation or of claiming more than in his judgment at that time might be allowed to the applicant, he informs the applicant of that fact and such a letter is technically referred

to as rejection, although the rejection is in no sense a rejection of the invention as a whole, but simply a rejection of the particular claims as worded.

Q. How many different kinds of interlocking devices?

A. Two.

Q. Explain to the jury what those two are.

A. One is the form of interlocking that is secured by the projection and recession of the lagging with reference to the bar which extends across the end, the frame bar, so that the segments may be held against moving inward or outward as the case may be; the other form of interlocking is the form of interlocking which prevents what may be described as a twisting movement between the two segments.

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any claim which included that type of interlocking and I did not consider it necessary to illustrate the other feature as it was not a point in this suit.

Q. Did or did you not at any time file a new specification?

A. No.

Q. Or a new application?

A. I did not.

Q. State whether or not it is an ordinary thing for all the elements to be old?

A. It is the usual thing.

Q. Can you recall to mind any patent in ordinary use, any invention in ordinary use, which is a combination invention and in which all of the elements are old and common?

A. Why, all the elements of practically every patent issued are old; it is the rarest thing to discover a new mechanical element.

RE CROSS EXAMINATION.

Q. You speak about this being a pioneer patent in respect of the notch in the templets to receive the invert segments, if I got your answer correctly?

A. That is a correct statement in part; my statement, at least as I intended it and understood it, was that it was a pioneer to the extent of the construction by which that particular manner of placing the invert was obtain, and by that I include not only the notch in the ring but the other

pieces which co-operate with that to secure the result.

Q. As a matter of fact, if there were anything new or novel about it it originated in the city engineer's office that drew the plans and specifications which went out upon the job, didn't it?

A. I think the facts do not in any sense sustain that statement.

Q. Well, isn't it a fact that if this templet were made in accordance with the plans and specifications for the molding of this particular form, that that idea originated first in the engineer's office before they could have made the plans?

A. No sir, the engineer's office is responsible for the origination possibly of the construction of the completed tunnel or sewer, but not of the means used in constructing that, and this patent covers the means used in the construction.

JAMES WILLIAM FITTS, called as a witness on behalf of the plaintiff, being first duly sworn, testified as follows:

DIRECT EXAMINATION.

BY MR. COOK:

Q. Mr. Fitts, do you live here?

THE COURT: What is the name, please.

THE WITNESS: James William Fitts.

Q. Mr. Fitts, do you live here?

A. I do.

Q. What is your business?

A. I usually follow contracting and construction work.

Q. About how long?

A. Well, about 18 years in Seattle I guess.

Q. Have you ever been in the business of making sewers, concrete sewers?

A. Yes sir.

Q. State whether or not you ever constructed any concrete sewers involving the use of Mr. Bassett's patent?

A. I did.

Q. How long were you in the business of constructing sewers using Mr. Bassett's patent?

A. The larger part of two years I think.

Q. Did you use these particular forms?

A. Yes sir.

Q. The particular bracing?

A. Well, not exactly the identical bracing.

Q. Did you ever have any difficulty with the forms collapsing under heavy pressure?

A. No, only one time, very slight.

Q. How much actual work did you construct, Mr. Fitts?

A. I constructed about a mile and a quarter of the north trunk sewer; part of it was eleven feet and a half and part of it was four feet and a half and part of it was—

Q. After the concrete was poured in was it absolutely essential that the bracing should remain in there to support the segments?

A. Well, the bracing below the—the invert bracing that the superstructure was built on would have to be in in order to support the superstructure; if a section was set up correctly with the invert bracing put up to its right place and the concrete was poured in carefully, why it might be constructed without any bracing at all except merely the invert bracing, but that was not the practice usually, we usually used considerable bracing; generally more than necessary.

Q. Who constructed the first concrete sewer in the city of Seattle, Mr. Fitts?

A. I think I did.

Q. Mr. Fitts, do you know of any other forms that will comply with the city specifications for building a concrete sewer with a brick invert other than the forms that are in use by Mr. Bassett?

A. Not for some of the sizes; now, they would not permit you to build, say for instance a 7 foot section, in two pieces; you had to build that all together, invert and everything, at the same operation; the larger sections they allowed you to use—make two pieces; now, there are different forms for making tubes where you make it in two sections, the invert first and then the arch afterwards.

Q. But to comply with the city's specifications you had to use these forms and you knew of no others?

A. Well, we did use them and I know of no better.

CROSS EXAMINATION.

BY MR. SHANK:

Q. Mr. Fitts, did yo uever use at any time the exact construction shown by plaintiff's exhibit 4?

A. Well, everything is the same except merely the arranging of the bracing.

Q. Well, that is what I am directing your attention to. Did you ever use at any time the bracing in the exact form and condition as shown by plaintiff's exhibit 4?

A. I don't think that we ever used it in exactly that form.

Q. Don't you know as a matter of fact that the bracings that you used were a great deal more in number than that?

A. No.

Q. And of a different character and braced the points in a different manner?

A. A little different manner, but not so numerous; we didn't use as many as that.

Q. Didn't you brace every joint of the segments?

A. No, not always.

Q. Do you mean to say that you set up your segments and didn't brace each joint?

A. Yes, many times, yes sir.

Q. Many times?

A. Yes sir.

Q. Now, what was the size of the sewer in which you did that?

A. Oh, 7 feet, 7 and a half.

Q. Did you ever in a 9 foot or $11\frac{1}{2}$ sewer set up the segments without bracing every joint?

A. Now, what do you call the joint?

Q. I call the joint that joint which is made by the two segments coming together; that is a joint, isn't it?

A. Yes, that is the joint.

Q. You knew what the joint was, didn't you?

A. There is different joints. We don't brace the—

Q. Just answer my question. Did you ever in a sewer 9 feet in diameter or 7 use or set up and pour a form concrete without bracing every joint?

A. I am not so positive about that; a $11\frac{1}{2}$ foot sewer; I don't remember whether we braced every joint or not positively.

Q. But you do say you never used the bracing in the form as shown by that exhibit, do you?

A. Not exactly.

Q. As a matter of fact you never tried it, did you?

A. We did in the large sewer; this bar would be a little lower down, we run the brace from that.

Q. And it would not work, would it?

A. Yes, sir, it worked.

Q. Why didn't you use that; why didn't you use this form that Mr. Bassett perfected a patent upon?

A. We used all the form except merely the bracing.

Q. Don't you know that that bracing as it is put in there absolutely would not work?

A. Oh, that would work.

MR. COOK: We object. This is improper cross examination. We are not claiming in the infringement of this patent that form of bracing at all or any means of mechanical equivalent.

THE COURT: I don't know what that form was brought in here for.

MR. SHEPARD: The patent.

THE COURT: You put this witness on stand for the purpose of showing this device was a practical operation.

MR. SHANK: A workable one.

THE COURT: A workable one and the object of the cross examination is to test the accuracy of the testimony in regard to that.

(Further discussion)

MR. SHANK: Am I permitted to ask these questions, Your Honor?

THE COURT: Yes, proceed.

MR. COOK: Exception.

Q. Mr. Fitts, you never used at any time then, as I understand it, that exact bracing?

A. Not exactly.

Q. Don't you know as a practical operator that if you did pour concrete around a form with that exact bracing that the segment 21 would be forced in by the pressure on the outside without some bracing at that particular joint?

A. Well, if you were to set that form right up on this space here and pour concrete around it for instance, any form—

Q. Yes, let us put it so that the jury can see it. Put it right there.

A. Let me set it that way; suppose you set it that way and this is the bottom of the ditch and you undertake to pour soft concrete around that form just as it sets now, the entire form, why, it would raise up.

Q. I am not talking about that. That is because of the pressure below, the uplift?

A. Yes sir.

Q. And as you pour that concrete the uplift becomes greater, doesn't it, Mr. Fitts?

A. The one section it would take it up.

Q. As a matter of fact the further you get down towards the bottom the greater is the pressure inwardly, isn't it?

A. If it was liquid.

Q. Then I come back to my question, to use that form model 4, don't you know that segment 21 braced as that is would collapse inwardly when you poured that concrete?

A. No, no.

Q. Do you mean to state that segment 21 would not drop in when the concrete was poured around if there were not braces at that point?

A. The brace is at that point.

Q. Where is the brace?

A. That is the brace, that is the key right there.

Q. But you never used that kind of a brace upon any of your work, did you?

A. We used exactly the same principle.

Q. Didn't you brace those by putting a brace in there and setting it up against the other part?

A. No.

Q. Never?

A. Sometimes.

Q. Why did you do that sometimes?

A. As we went around these braces we were having different men setting forms who would put the different things in, but this key was—

Q. You had a carpenter upon the job?

A. Yes sir.

Q. And as each carpenter would come upon the job he would try and improve it and make it handier?

A. Some would do one thing and some another.

Q. And they were changing all the time, trying to perfect an arrangement which would work the best, weren't they?

A. Yes sir.

Q. Now, referring to wedge 13, do you mean to state that that wedge would not press right inwardly as the pressure came on the outside?

A. Well, no, that couldn't come out.

Q. I am not speaking about the wedge coming out. I am talking about segment 21 coming out.

A. Segment 21 can't come out because that is dovetailed in against this brace, it can't get out.

Q. This is what you did out there, isn't it: These segments would increase in width or weight just as they became soaked with water or otherwise, wouldn't they?

A. They would get heavier, yes.

Q. A new segment was very much lighter than an old segment?

A. Yes sir.

Q. And they would swell; isn't that correct?

A. Some.

Q. And as you set these segments up you would have to cut off the end of transverse sill 6 in order to give a space here for the resting of these segments, if the room was required, wouldn't you?

A. We always left plenty of space to take up slack at that point.

Q. Were you upon the Grant Smith job all the time?

A. Well, I was on the job from some time the first start of it until, oh, I don't know, most of the two years, I don't know exactly.

Q. I wish you would look at that photograph, that I am handing you and state whether or not that is not the exact job that you were upon; isn't that the job?

A. It looks like some of the work.

Q. Don't you recognize that as the forms that you actually used there?

A. It looks very much like it.

Q. And you were upon that job as foreman at the time that work was going on?

A. I don't know about this particularly.

Q. Don't you recognize that form as the exact form that was being used out there?

A. It looks to me like it, but I can't recognize it very clearly because it is very dim.

MR. SHANK: Mark it for identification.

(Photograph referred to marked defendant's Exhibit "H" for Identification.)

Q. I now show you Defendant's Exhibit "H" for Identification and ask you to state whether that is not the Grant Smith job on which you worked and were working at the time that particular piece of construction, of which that is a photograph, was taken?

A. Well, it looks to me like some of the work, but I couldn't swear as to that spot.

Q. You did work exactly like that, didn't you?

A. It looks like it but I couldn't say exactly, that is rather dim.

MR. SHANK: I want to offer this in evidence, if the Court please. This is a little plainer, if I may use that instead of this. The one is a little plainer than the other and I will use that instead of the other.

THE COURT: What is it?

MR. SHANK: It is a photograph of sewer construction handled by witness Fitts on Grant Smith work. Before I go further I want to hand this to the jury. In order that—

THE COURT: Any objection. No objection. It will be admitted.

Photograph referred to, marked Defendant's Exhibit "H" for Identification, admitted

in evidence and marked Defendant's Exhibit "H."

MR. SHANK: In order that it may not confuse the jury—my hand is at the top—I will put an X there.

(Defendant's Exhibit "H" handed to the jury.)

Q. Now, Mr. Fitts, with your permission, I will refer to this, which is the same one and we can proceed.

Mr. Fitts, isn't the system of bracing which you used upon that entirely different from that shown by plaintiff's exhibit 4?

MR. SHEPARD: I object to that as immaterial, because the inside system of bracing is not any part of the claims infringed.

THE COURT: Objection overruled.

MR. COOK: Exception.

A. Well, up to here this was practically what we used for the bottom.

Q. Well, look and see if it is.

A. Practically.

Q. Haven't you got a cross piece here in the center?

A. Perhaps. Let's see this.

Q. Don't your braces run across the inside diameter of that surface—of that sewer?

A. Well, the cross piece that you see there is possibly leading you to a misapprehension; in this particular size sewer you see that the band was in two pieces there.

Q. Yes.

A. The band was made in two pieces, but when it was set up it was one; that is probably the bar that you see across there.

Q. But if I am mistaken, what do you see; do you see anything like plaintiff's exhibit 4?

A. Very much like it.

Q. Where; in what particular?

A. Take the braces running down to the center all along there I can see them dimly, not very plain.

Q. How was the bottom braced; were the joints between the invert and the upper segments braced?

A. Always braced just like that, practically.

Q. Isn't that braced entirely differently?

A. No, I can't see it, but I know it was braced just like this; I can't see the invert here because it is not plain enough.

Q. Now, as a matter of fact why didn't you use this exact form?

A. We used practically the exact form up to there.

Q. The exact form up to there?

A. We used this principle, this part here.

Q. But you didn't use this upright here, upright 7?

A. We did on that big sewer I think.

Q. Did you use it on this sewer?

A. Here is an upright brace right through the center.

Q. Where does the bottom of that rest?

A. It probably rests on this right here.

Q. Probably—but does it?

A. I can't see whether it does or not.

Q. Don't you know as a matter of fact it never did rest there?

A. No, I do not.

Q. It never did rest there?

A. I am sure that we did use it there most of the time.

The witness then testified that he set up and poured four or five sections a week.

Q. Mr. Fitts, don't you know that when you first got those segments out there that you used every sort of conceivable brace you could think of and that you had not calculated about the invert and that you were obliged to cut out a portion of the invert in order to remove it?

The witness testified as follows: Maybe we had to take a plank out of it; I don't remember. I altered the size of the segments and had them all cut down.

Q. Now, don't you know also that when you put up the bracing in that you put the bracing in your form so thick one of your men got fastened in there and you had to take out some of the bracing to release him?

A. No, that is not true.

It was not true, that is all imaginary.

A. H. ALEXANDER: called as a witness on behalf of the plaintiff, being first duly sworn, testified as follows:

DIRECT EXAMINATION.

Mr. Alexander testified that he had lived in the city of Seattle about 22 years. That he had been an inspector on the north trunk sewer for the city, and that he had inspected the sewer work constructed by both Mr. Bassett and the Erickson Construction Company. That the forms used by the Erickson Construction Company differed from the forms used by the plaintiff, to-wit: instead of using a templet made in one piece as the plaintiff the Erickson company used a divided templet, also the Erickson company used a solid sill in the invert, and the bracing above the invert was in the form of half circles instead of the type illustrated in Mr. Bassett's drawing.

CROSS EXAMINATION.

Mr. Alexander testified on cross examination in substance the same as he had on direct examination, that is to say that the Erickson Construction Company had used a divided templet, and used the arch system of bracing in place of the fan type and that the transverse sill in the invert was solid, and that he had never witnessed any bracing exactly like the type illustrated in plaintiff's Exhibit "4".

MR. SHANK: That is all. I would like to offer this drawing in evidence.

THE COURT: Any objection?

MR. SHEPARD: If it comes in as a part of the defensive evidence, I don't think it is proper to offer it at this time.

MR. SHANK: I am offering it as a part of my cross examination.

THE COURT: I understand that. I say is there any objection to its being offered as a part of the cross examination.

Here the witness testified that the bracing used by the plaintiff upon his sewer job differed from the bracing shown in his Exhibit 4, and described the various points of difference, and that this style of bracing used by the plaintiff on his job differed at various times, and that the bracings used by Erickson on his job differed from those used by Bassett.

If not it will be admitted.

Drawing referred to marked defendant's Exhibit "1" for Identification, admitted in evidence and marked Defendant's Exhibit "1".

J. P. DOOLEY, called as a witness on behalf of the plaintiff, being first duly sworn, testified as follows:

DIRECT EXAMINATION.

Mr. Dooley testified that he resided in Seattle, that he was a carpenter by trade, and had worked in that capacity for about 15 years. He had been

employed by Mr. Bassett during the time he was constructing the north trunk sewer, and that the bracing used generally was different from the type illustrated in the model, plaintiff's Exhibit "4", but that he had set up forms with a bracing similar to the type illustrated in Exhibit "4" on a job over at 65th and that the size of the tunnel was 11 foot 6.

CROSS EXAMINATION.

Mr. Dooley testified on cross examination that he was engaged as carpenter on the Grant Smith job on or about the 20th day of September, 1908.

Q. Mr. Dooley, you never used this form of bracing at any time did you?

A. Yes sir.

Q. This exact form?

A. Yes sir.

Q. That identical form of bracing?

A. Yes sir.

Q. That bracing, the joint where segment 21 joins, rests upon the cross sill 6, do you mean to state to the jury that that was left in that shape?

A. Yes sir, that identical shape there.

Q. I am not speaking about there; I am speaking there.

A. I am speaking about the entire form of bracing right there, the way you see it in the end of that tube.

Q. And there was no brace at all at the point where segment 21 rests upon wedge 13?

A. Do you mean right here?

Q. Yes.

A. The brace right there does; see there is your angle and there is your wedge.

Q. Don't you know as a matter of fact as a mechanic that that segment 21 would mash inward when the pressure came on it out here?

A. It can't possibly after having four or five of those braces there.

Q. Don't you know that is simply a wedge there and won't that wedge give way and let the segment press right in?

A. No sir; at least it never did with us.

Q. I wish you would state just when you used that identical form of brace?

A. We used that up on a portion of the job known as Rivers & Larson's work, which is just south of 65th.

Q. When?

A. It was in 1910 I think it was.

Q. In 1910?

A. I think it was; I wouldn't be positive of the date.

Q. Were you the carpenter on the job at that time?

A. Yes sir.

Q. Who else was on the job?

A. A man by the name of Caldwell and another man by the name of Kerr.

Q. Who was the city inspector on the job?

A. The city inspector there at that time?

Q. Mr. Dahl?

A No.

Q. Mr. Alexander?

A. It was Mr. Worley.

Q. Mr. Worley was the superintendent for the city though, wasn't he?

A. Yes sir.

Q. He was also upon the job?

A. Yes sir.

Q. Now, wasn't Mr. Alexander the city inspector in fact at that time?

A. Mr. Alexander was inspector part of the time.

Q. Was he inspector part of time you used this particular form?

A. I believe he was.

Q. Now, how long did you use that form?

A. Why, I think it was either three or four sections we put in there to finish up; that was a subcontract you understand, Rivers & Larson had taken a subcontract.

Q. Three or four sections?

A. I think it was; I wouldn't be positive.

Q. What is your recollection?

A. I am not going to be positive, because my memory don't serve me.

Q. Was it more than four sections?

A. I don't think so.

Q. How many sections were there in the north trunk sewer?

A. That is something more than I could tell you.

Q. Several hundred, weren't there?

A. Yes sir.

Q. At the time you used this particular bracing was Mr. Bassett there?

A. No.

Q. He was not on the job at all and didn't see this used?

A. He was back and forth every day.

Q. Did you know whether or not he saw this particular bracing used at that time?

A. That I couldn't say.

Q. But you used it on three or four of the sections?

A. Yes sir.

Q. Why didn't you use it on the rest of them?

A. Because there was no more to be done.

Q. That was all a subcontract, was it?

A. Yes sir.

Q. And at the close of the work?

A. It was the close of that particular piece of work.

Q. You had other work to do out there?

A. There was other work to do.

Q. But you never used that particular form upon any of the other work?

A. We didn't have occasion to use it because the rest was tunnel work; which was different work.

Q. What was the size of that sewer?

A. I think it was eleven foot six.

Q. Was it eleven foot six where Larson and these other parties had that subcontract?

A. The Larson, that is the place I speak of.

SWAN PETERSON, called as a witness on behalf of the plaintiff, being first duly sworn, testified as follows on direct examination:

That he resided in the city of Seattle, and that he was a contractor, and had worked for the Erickson Construction Company for three years on the north trunk sewer. That the forms used by the Erickson Construction Company consisted of segments like the ones in plaintiff's Exhibit "4" both above and in the invert. That a divided templet was used in place of a solid one, and that the transverse sill spanning the invert was made in one solid piece in place of the type exhibited in Bassett forms. That wedges were inserted to expand the segment above the invert, and that for 16 or 20 foot sections there was a key inserted in the center of the invert, sometimes two.

CROSS EXAMINATION.

Q. Step over here please. It is not a fact that the Erickson Construction Company used this form of interior bracing upon their work? (Referring to Defendant's Exhibit "1".)

A. Yes sir.

MR. SHEPARD: We object to that as immaterial on the ground that the bracing is not an essential part.

THE COURT: Well, he has testified what this construction was; now this is the cross examination.

Q. They used the same form of bracing as shown here in Defendant's Exhibit "1", didn't they?

A. Yes sir.

Q. That identical form of bracing and the segments of the upper part rested on the segments of the lower part and this notch in that way?

A. Yes sir.

Q. And the templet was made in two pieces?

A. Yes sir.

Q. A lower half and an upper half?

A. Yes sir.

Q. And the inner bracing was made in two pieces, a lower half and an upper half?

A. Yes sir.

Q. And when you wanted to take up the slack that existed there you would drive wedges at the intersection of each one of these segments?

A. Yes sir.

Q. And then you would put a wedge in here at the base of this particular bracing?

A. Yes sir.

Q. So as to lift the whole thing up, thus tightening the bracing below and tightening the bracing above at this one drive; that is correct, isn't it?

A. Yes sir.

C. J. ERICKSON, called as a witness on behalf of the plaintiff, being first duly sworn, testified as follows; on direct examination.

That he was president of the defendant, the Erickson Construction Company, and was such at the time when his company received the contract with the City of Seattle for building a portion of the north trunk sewer.

Q. You had personal charge of that work, did you not, so that you were familiar with it?

A. Yes sir.

Q. How many feet of that sewer, including the two sewer contracts were there, that you built?

MR. SHANK: I object to that as immaterial.

THE COURT: What is it?

MR. SHEPARD: That of course is bearing upon the question of damages.

THE COURT: Well, you don't measure your damages by the benefit received by this patent. That is not what you are claiming, is it?

MR. SHEPARD: Of course we will follow that up by other evidence as to what the basis or ratio of damages should be according to the number of lineal feet.

THE COURT: Do you merely want to show to what extent the defendant used your plans?

MR. SHEPARD: Yes.

THE COURT: I will permit you to do that.

MR. SHEPARD: That is what I am. I mean to follow it up.

A. I can't say how many feet.

Q. Did these contracts which you made with the City indicate the number of feet?

A. Yes sir; part of it was brick and part of it was half brick and half concrete and part of it was all concrete except the invert or the flow line.

Q. Did you use upon those contracts the forms shown by your exhibit on the blackboard, exhibit "1"?

A. Where we built concrete sewer except the flow line we used that form.

Q. You used that on the north trunk sewer?

A. Yes sir.

Q. The whole of it; that is the whole of the contract that you had?

A. Of what we call the concrete sewer.

Q. What was the size of that sewer?

A. Nine feet inside diameter.

Q. Is that the size of the whole length of it?

A. Yes sir.

Q. On both of the contracts which you had with the City?

A. No, on the Lake Washington section there was different sizes; part of it was brick sewer altogether.

JOHN W. KELLY, called as a witness on behalf of the plaintiff, being first duly sworn, testified as follows:

That he was in the employ of the City of Seattle, in the capacity of Deputy City Comptroller having charge of the contracts.

Q. Have you in your possession contracts made by the Erickson Construction Company or C. J. Erickson with the City relating to the north trunk sewer?

A. Yes sir; that is the Lake Washington District of the north trunk sewer district made by the Erickson Construction Company.

The witness then testified that contract included all of the work for that particular division contracted for by the Erickson Construction Company.

MR. SHEPARD: We offer this in evidence.

MR. SHANK: Objected to as immaterial—

THE COURT: What is it offered for?

MR. SHANK: —and irrelevant.

THE COURT: What is the object?

MR. SHEPARD: The object of it is to lay a basis for the assessment of damages. It fixes the number of feet, lineal feet. I will show later by the plaintiff that his charge for royalty would be based on the number of feet. That is the very ordinary way of calculating royalty on a patent.

THE COURT: I assume this is simply the contract. Is it to be followed up that the contract was completed or is it conceded the contract was completed?

MR. SHEPARD: Mr. Erickson testified he was not able to say how many feet, but he performed the contract or his company did. Now, we produce the contract which shows the number of feet that the Erickson Construction Company contracted to—

THE COURT: Well, is this conceded to be the contract?

MR. SHANK: I have no doubt it is, Your Honor. I haven't—

THE COURT: Can you agree upon the number of feet here instead of incumbering the record with that contract?

MR. SHANK: I can't agree to something, Your Honor, that I have no knowledge upon.

THE COURT: Very well. It may be admitted. Admitted for that purpose.

MR. SHANK: You record my objection to it, Mr. Reporter. I simply reserve my objection because of the questions of law that I wish to present a little later, Your Honor.

Contract referred to admitted in evidence
and marked Plaintiff's Exhibit "8".

CROSS EXAMINATION.

BY MR. SHANK:

Q. Are you sufficiently familiar with this contract, Mr. Kelly, to state whether it contains the number of feet of concrete sewer, the number of feet of pipe, the number of feet of brick and concrete, and the number of feet of the different forms of construction?

A. I don't believe that the contract itself expresses the number of feet; the estimates that we received from month to month give the exact number of feet; the contract is approximate.

Q. The contract does not then state that fact?

A. No sir; the estimates would show those.

C. J. ERICKSON, recalled as a witness on behalf of the plaintiff, having been previously duly sworn, testified as follows:

MR. SHEPARD:

Q. Mr. Erickson, I show you plaintiff's exhibit "8", being the contract for the Lake Washington district of the north trunk sewer made by the City of Seattle with Erickson Construction Company, incorporated, and ask you if the signature at the foot of the contract is not the signature of your company by yourself?

A. Yes sir.

Q. I show you the paper which has been offered in evidence and which is denominated "23rd Monthly and Final Estimate of the Lake Washington District of North Trunk Sewer," and ask you if this is the monthly and final estimate which you accepted?

The witness testified that he had never accepted it; that it was unsettled.

Q. For what reason did you refuse to accept it?

MR. SHANK: I object to that as immaterial.

THE COURT: That may be wholly immaterial and it may be material. I think your question should be confined to the purpose for which you have introduced these exhibits.

MR. SHEPARD: That is what I am trying to get at.

THE COURT: But your question covered a little too much.

MR. SHEPARD: I desire to show the number of lineal feet that he did under that contract.

THE COURT: Then confine your question to that.

Q. This final estimate, Mr. Erickson, states a column of figures, but it does not contain a final footing of the figures, but it gives the numbers of lineal feet that were done by your company under that contract for which the city estimates were given; now, was that too many or too few feet?

A. Well, that is not settled yet.

Q. It is not settled whether it is too many or too few feet?

A. Yes sir.

Q. What do you claim; it is too many or too few feet?

A. Well, it is too few in some places and it might be too many on other place.

Q. Do you know the total; how many did you claim was the total?

A. That is between me and the City.

Q. You admit that you did a large quantity of work on that sewer under that contract, did you not?

A. I done it all.

Q. Or your company did?

A. Yes.

Q. And the contract is completed?

A. The contract is completed.

Q. And you have a dispute with the city as to the exact number of feet of different sections of it; is that it?

A. It is not settled yet.

Q. Do you know the number of feet that you did?

A. I don't know exactly how many feet it is.

Q. How many feet did you claim to the City that you did?

A. Well, that ain't settled yet.

Q. Did you make any claim to the City on that subject?

A. I have not made any claim; I think I will get what is coming to me.

Q. Did you make any claim whatever to the City?

A. I haven't made any claim; I think I will get it when they get time to figure up.

Q. Have you made any claim under the Lake Union contract?

A. No sir.

Q. Is that Lake Union contract finished—completed?

A. Sure, long ago.

Q. How?

A. Yes sir.

Q. You have not put in your claim to the City on that, have you?

A. There is no claim on that.

MR. SHEPARD: If the Court please, we offer this estimate given by the City. That is at least prima facie evidence of the number of feet that he did on that contract.

THE COURT: The offer is denied. Do you want that identified as an exhibit, so that you will have it in the record?

MR. COOK: Yes.

THE COURT: That will be Plaintiff's offered exhibit No. 9.

MR. SHEPARD: This is offered as Plaintiff's Exhibit "9" and rejected by the Court.

JOHN W. KELLY, a witness produced on behalf of the plaintiff, being recalled, testified as follows:

MR. SHEPARD: If Your Honor please, I don't want to engage in any debate with the Court on this subject, nor waste the Court's time, but we simply want to preserve the plaintiff's rights by making certain offers of evidence.

Q. Mr. Kelly state whether this document identified as plaintiff's Exhibit "9" is or is not the original final estimate of the work on that section of the north trunk sewer.

A. Supposed to be the original final estimate, yes sir.

Q. Was or was not a copy of this furnished to the Erickson Construction Company?

A. Well, there are copies ready to be furnished to all contractors on contracts if they wish to call for them; I don't know whether we furnished one or not.

Q. Have you in your possession the original estimate for the month of May, 1911?

A. Yes sir, I have all the estimates that were furnished on the contract.

Q. Produce it, will you please?

A. May, 1911?

(Witness produced paper and paper was handed to counsel for defendant.)

MR. SHEPARD: If the Court please, this is for May 31, 1911, and the object of offering it is to show what was the estimate of the work done up to that time, because that is the nearest estimate to the time of the granting of the patent, the patent having been granted April 25, 1911. Of course we would have no right to recover damages in any event for any infringement prior to the date of the granting of the patent. The final one was in July, 1912, and consequently the basis of damages, if allowed at all, would be the difference in the work done from the one date to the other.

Whereupon counsel for the defendant objected to the document as incompetent, irrelevant and immaterial and not the best evidence and not the proper method of proving it, as all the estimates are made by the engineering department of the city, as the witness was not connected with the engineering department at the time the estimates were made.

Paper referred to marked Plaintiff's Exhibit "10" for Identification.

Q. Who paid the Erickson Construction Company from month to month on these estimates under this contract?

A. I make all payments to contractors.

Q. You personally paid them?

A. Personally paid the company or their assignee.

Q. Did you pay according to the monthly estimates furnished you by the engineering department?

A. Yes sir, the audit of the auditing committee of the City.

Q. Did you or did you not pay the Erickson Construction Company on the basis of this estimate of May 31, 1911?

A. The payments for May's work, would be paid in June, the month following.

Q. That is on the 25th of June you paid on the basis of this May estimate, May 31st estimate, which is plaintiff's exhibit "10"; is that correct?

A. Yes sir, whatever exhibit.

Q. On this one?

THE COURT: Was the payment accepted?

THE WITNESS: Yes sir.

THE COURT: What is the purpose of the offer?

MR. SHEPARD: The purpose of the offer is—of course that is only a starting point.

THE COURT: I assume it is the same as the other, to show the number of lineal feet.

MR. SHEPARD: It is to lay a foundation for award of damages based upon the lineal feet paid for, because the lineal feet paid for is the amount of lineal feet constructed, and we have evidence to go to the jury that the Erickson Construction Company used our forms in performing that contract.

MR. SHANK: The testimony is that the work has not even yet been accepted and the amount there has not been adjusted, by their own witness.

THE COURT: That was on the final estimate, Mr. Shank.

MR. SHANK: Yes, on the final estimate, but the final estimate would be controlled entirely by the details as they went through the work. They have got to arrive at some particular point, Your Honor, at which you can say so many feet of this sewer was constructed, and the testimony is that it is not yet settled and still in dispute with the city engineer.

THE COURT: I understand. This is offered for the purpose primarily of showing the number of lineal feet that were constructed prior to the issuance of the patent as nearly as you can fix the date?

MR. SHEPARD: Yes, that is the idea. Of course we don't claim anything for prior to the patent.

It will be admitted in evidence and marked Plaintiff's Exhibit "10".

Q. Mr. Kelly, are these documents which you have just handed to me the original monthly estimates from May 31st, 1911, down to the final estimate of July 31, 1912?

A. Yes sir.

Q. And you paid month by month to the Erickson Construction Company on the basis of these estimates?

A. Yes sir.

Q. And they were all furnished you by the engineering department of the City?

A. Yes sir.

MR. SHEPARD: We offer the whole of them to be marked separately by the Clerk for the purpose previously stated.

THE COURT: In their consecutive order; that is from month to month as they appear there.

MR. SHANK: I object to them upon the ground that they are incompetent, irrelevant and immaterial and not any basis of forming an estimate for damages and not the proper way to prove damages.

THE COURT: As I understand, they are offered for the purpose of showing the number of lineal feet of sewer that was constructed by the defendant.

MR. SHEPARD: Yes, and nothing else.

MR. COOK: We don't care whether there has settlement been made or not.

THE COURT: They will be admitted for that purpose and marked Exhibits "9" to "23" inclusive.

CROSS EXAMINATION

BY MR. SHANK:

Q. Mr. Kelly, when estimates are put in you do not pay the entire estimate, do you?

A. No, we pay 70 per cent of the estimate.

Q. You pay 70 per cent of the estimate and the balance of it is held back until the final settlement?

A. Until the final settlement.

Q. On this particular job there has never been

a final settlement with the city?

A. Yes sir.

Q. And accepted by the City?

A. Yes sir.

Q. And a final payment?

A. And a final payment.

Q. Will you please produce the vouchers to show that?

A. Well, if I did I would have to fetch the vouchers showing where Mr. Erickson or his representative signed them on the books.

Q. Why didn't you bring them up here?

A. I was not asked to.

Q. Don't you know as a matter of fact, Mr. Kelly, that at the present time there is a dispute between the city engineering department and the Erickson Construction Company as to whether certain sewer in the structure over the boulevard for instance is included in the structure, and other items on which there is a dispute as to whether the city is obliged to pay the Erickson Construction Company for those items or not?

A. No sir, I do not.

The witness then testified he knew nothing about disputes with the engineering department; that the payments made to the Erickson Construction Company from month to month was simply accepted by them on account.

HENRY W. BASSETT, the plaintiff, being recalled as a witness on his own behalf, testified as follows:

DIRECT EXAMINATION.

BY MR. SHEPARD:

Q. Mr. Bassett, this patent having been granted to you in 1911, state whether or not you have let any royalties on it, any royalty contracts under it?

A. No sir, I have not.

Q. Did you or did you not have any applications from any persons negotiating with you to use your patent, this patent?

MR. SHANK: I object to that as incompetent, irrelevant and immaterial.

THE COURT: Objection sustained.

MR. SHEPARD: That is merely introductory, Your Honor, to lead up—

THE COURT: Showing what the offers were? The objection will be sustained.

Q. You say you had such negotiations?

MR. SHANK: Well, the court sustained the objection to that.

Q. How soon after the patent was granted did you open negotiations with any parties for granting licenses?

MR. SHANK: I object to that as incompetent, irrelevant and immaterial.

THE COURT: The objection will be sustained.

MR. COOK: Exception.

Q. How soon after the granting of the patent did you ascertain of your own knowledge that the defendant was infringing, as you claim, was using your patented device?

A. They had been using it long before and using it continuously, they were using it continuously, long before I got the patent and afterwards.

Q. What is a reasonable royalty or license fee based on the number of lineal feet for the use of this patented device?

MR. SHANK: I object to that as incompetent, irrelevant and immaterial, and no proper foundation laid.

THE COURT: The objection will be sustained. I don't know how you are going to establish what is a reasonable royalty when you say you never had any.

MR. SHANK: They plead it, Your Honor. They set it up in their pleadings.

MR. COOK: We have cases, Your Honor, that hold in the absence of an established royalty, a reasonable royalty becomes the basis.

MR. SHANK: I insist upon the objection.

THE COURT: Well, the objection has been sustained.

MR. SHEPARD: If Your Honor desires authorities to be produced we can show Your Honor that the courts have held that in the absence of an established royalty, owing to the youthfulness of the patent, the patent being granted so recently or otherwise, the plaintiff may show in an action at law for damages what is a reasonable royalty for the use of it or he may show as bearing upon it, reasonable royalty for the use of it or he may show as bearing upon it, to be submitted to the jury, the

profits that may be made or have been made by the defendant out of the use of the patent.

THE COURT: If this was an equity proceeding that might be the case, but in an action at law I don't see how you can show what profits the defendant may have made out of it, as the Court understands it. Of course I am perfectly willing to hear from you on the subject of the proper measure of damages, but I don't see how you are going to establish the value of a license fee unless you show that you have uniformly granted licenses under similar circumstances and conditions and what the value was, that it was not in settlement of some dispute, claim or something of that kind. That still does not exclude you from showing the value in some other way possibly.

MR. SHEPARD: We call Your Honor's attention to the fact that this invention was infringed; at least we have procured evidence to show that it was infringed before the patent was granted, after the application was made, and in cases of that kind, it having been impossible to establish any royalty while that application was pending, evidence of the profits and of the general advantage resulting from the use of the patent may be resorted to to enlighten the jury upon the subject of the damages caused to the plaintiff by infringing his device.

THE COURT: Do you claim the right to damages prior to the issuance of the patent?

MR. COOK: No sir.

MR. SHEPARD: Not prior, but where the device has been used by an infringing defendant prior to the patent, and has been continued, as we have shown here, after the patent was granted. Damages can't be awarded by the jury or the Court for any infringing action prior to the issuance of the patent, but they run from the issuing of the patent.

Q. Mr. Bassett, you yourself have used this device, have you not.

A. Yes sir.

Q. Will you now, with the permission of the Court, state to the jury what is the amount of saving in lumber or otherwise affected by using this patented device over using the previous unpatented devices?

MR. SHANK: I object to that as incompetent, irrelevant and immaterial and not the way to prove damages.

THE COURT: I don't know what you are comparing it with.

MR. COOK: Your Honor, the courts have held, in the absence of an established royalty, general evidence can be resorted to, showing the saving that follows the use of these patents over and above any forms that were not patented. Now, we are not going to show the saving over and above forms that were patented, but over and above forms that were not patented, and open to the public to use.

THE COURT: I appreciate your question, but I say I still don't know what you are comparing it

with, nor do I know that this witness is competent to make the comparison.

MR. COOK: The actual saving of the wood that was left in these sewers before forms were constructed and patented by Mr. Bassett, the actual saving in time and material.

THE COURT: I don't know as it has been shown in evidence that that condition of affairs existed prior to this patent; that prior to that time forms were only used that way, knocked down and wholly destroyed, if that is the purport of your question. I don't know what you are comparing it with. There is no evidence to support any such comparison.

Q. I ask you what was the cost of the lumber in construction of the different sizes of trunk sewer without the use of your patented forms, that is with the use of the unpatented forms at and after the time when the patent was granted.

MR. SHANK: I object to that as incompetent, irrelevant and immaterial and it is not shown that this witness is qualified to testify upon it, and it appearing upon the face of it that that would vary absolutely with the different sizes of sewers.

MR. SHEPARD: That is what we propose to have him proceed to show, the cost of the different sizes.

THE COURT: I don't know what you are going to compare it with. This witness has not shown that he is competent to answer the question, nor has the evidence developed that prior to the use of his invention the only way to construct sewers

was to put in lumber in permanent form and then tear it down and throw it away. I don't know what you are going to compare it with.

MR. SHANK: They might have a certain amount of salvage in the form and waste only one board.

Q. What was the system of constructing sewers prior to your invention?

THE COURT: In the end it seems to me, assuming that to be the fact, it would more probably demonstrate the profit of the defendant rather than the value of the use to the plaintiff.

MR. SHEPARD: I propose to follow that up by showing the cost and then the relative saving made by the use of his device.

THE COURT: I appreciate this: this under the circumstances, there never having been any royalties charged on the use of this device, that it is a somewhat difficult question in an action at law to establish the correct measure of damages, and I appreciate also that it is an important phase of the case to both parties, and if you gentlemen have any authorities on the subject as to what the measure of damages is I will be pleased to hear from you at this time, and if you desire to take the time between now and five o'clock to present it I will excuse the jury at this time and let you do so.

THE COURT: I am perfectly willing to hear you on any modern authorities, but I don't care to take up the time in finding out whether our own Circuit Court of Appeals have committed error in

trying to follow those or not. I think that is conclusive on this court. You were cited these cases last night and in view of these authorities and those that are up to date I would like to hear from you on them.

MR. SHEPARD: The case of Seymour against McCormick.

THE COURT: The case of Seymour against McCormick has been distinguished by the Circuit Court of Appeals. Judge Vandevanter who was on that circuit and participated in that decision is now a member of the Supreme Court.

MR. SHEPARD: I know Judge Vandevanter took part in that decision. Does Your Honor care to hear this decision of Seymour against McCormick?

THE COURT: Not at all, no.

MR. SHEPARD: Very well, if Your Honor will permit us, we simply want to preserve our rights by asking some additional questions of the plaintiff, so as to make a record, when the jury assembles.

Q. Mr. Bassett, do you know the amount of lumber required in constructing these forms for the different sizes of sewer?

A. Yes sir.

Q. Do you know the amount of lumber required in constructing the unpatented forms to make the sewer the same size and the same shape?

MR. SHANK: I object to that as incompetent, irrelevant and immaterial and laying no foundation for any claim for damages.

THE COURT: I think so, but I will permit him to answer.

MR. SHEPARD: He is asked—

THE COURT: Go ahead. I am going to let you make your showing.

A. Yes sir.

Q. State, if you know, the amount of lumber that would be used on the different sizes of trunk sewers without the patented form and with the patented form and the difference in cost between them. (Handing witness paper.)

MR. SHANK: What is that paper that you gave the witness; something that he made himself?

MR. SHEPARD: That is a memorandum that he made himself.

MR. SHANK: Did you make that yourself, Mr. Bassett?

THE WITNESS: Yes sir.

MR. SHEPARD: He simply handed it to us for information.

A. I have only on this paper the amount of lumber required in unpatented forms, figuring on making the rings and nailing flooring on, and so on.

MR. SHANK: Same objection to this question, Your Honor.

THE COURT: Yes.

A. (Continuing) And for 11 foot sewer it would take 43 feet of tongued and grooved flooring, 11 feet of 2 by 6, and also an item of labor. Did you want the cost?

Q. We want the quantity of lumber.

A. 9 foot sewer it would take 35 feet of 1 by 4.

Q. Quantity; and the cost.

A. Figuring the 11 foot sewer I figured 43 feet of tongued and grooved flooring, at \$20. per thousand, 11 feet of 2 by 6 common at \$100. a thousand—

MR. SHANK: If the Court please, can't this witness give the aggregate without saying so many 2 by 4s and so many 3 by 6s and so forth?

MR. SHEPARD: We don't care to give the details unless you desire to cross examine.

MR. SHANK: I don't desire any of it.

MR. SHEPARD: Just give the totals for each size of sewer.

MR. SHANK: My objection will go to all this line of testimony, Your Honor.

A. For 11 foot sewer, lumber and labor, \$1.78 per lineal foot; for a 9 foot sewer, \$1.45 lumber and labor per lineal foot; for a 6 foot sewer, lumber and labor \$0.95 per lineal foot; for a 5 foot sewer, lumber and labor \$0.82 per lineal foot; for a 4 foot sewer, lumber and labor \$0.67 per lineal foot; those are all the sizes that I have.

Q. Are these figures the total cost for the unpatented or the patented device?

A. It is the total cost for the unpatented, figuring on putting them up.

Q. How much of that is waste from using the unpatented device and tearing it down after the sewer is built?

A. I could only estimate that; I figured the waste would be about 50 per cent of the material.

Q. And do you mean to be understood to say—

MR. SHANK: Please don't lead your witness. He is your witness.

Q. State what is the amount of saving or advantage in the use of the patented device over the unpatented device open to the public in the saving of material and time and labor.

MR. SHANK: I object to that as incompetent, irrelevant and immaterial and that this witness has already shown that that is impossible of calculation, because he has stated that he can only estimate the amount of waste.

MR. COOK: That is all we want.

THE COURT: I think it is unquestionably a pure speculation and a conclusion of the witness and that there has no foundation been laid, but I am going to permit you to make your case. I don't think it is going to affect the result of it.

MR. SHANK: Over my objection, Your Honor?

THE COURT: Certainly.

Q. Is there or is there not an advantage or gain in economy of labor and material in the use of the patented device?

A. Yes sir, there certainly is.

Q. What is that advantage or gain?

A. I figure—

MR. SHANK: The same objection, Your Honor.

THE COURT: Yes. Understand, that this is on request of counsel that he be permitted to establish his theory of the case. That is the only reason I am letting it in.

MR. SHEPARD: Yes, Your Honor.

THE COURT: Not that the Court regards it competent in any respect.

Q. The contract that you had with the City—

A. What was the question?

Q. —was taken before you got out your patented forms, was it not?

A. Yes sir.

Q. What would have been the financial result to you in performing that contract with the city if you had used the old unpatented device instead of your patented device?

MR. SHANK: I object to that as incompetent, irrelevant and immaterial. It makes no difference what would have been the result to him. He didn't have the patent.

MR. SHEPARD: That is simply to lead up to the difference in the cost.

THE COURT: I am permitting you to prove everything you want to. Now go to it.

MR. SHEPARD: We offer to show by this witness in the performance of this contract that the city—

MR. SHANK: Go ahead and ask the questions. The Court has permitted you to ask the questions.

Q. Answer the question.

A. I figured the cost of using these forms would have been about 15 per cent, using the figures that I gave you from this paper, by the use of the patented forms I figure there was a saving of 85 per cent of labor and material.

Q. What was the condition of your work before you got up these patented forms as to saving or losing on it?

A. I didn't use any other forms only these; I tried them out right from the beginning.

MR. SHANK: I move to strike from the record all—

THE COURT: Maybe he is not through yet. Are you through?

MR. SHEPARD: Yes.

THE COURT: Very well. What is your motion?

MR. SHANK: I move to strike from the record all testimony of this witness with reference to the amount of lumber, the percentages saved and the other testimony relating to the use of this patent, given upon the stand this morning since his having been recalled.

THE COURT: Have you anything to say, Mr. Shepard, in resistance of the motion.

MR. SHEPARD: I simply make my record in that way. I don't care to argue the question any more to Your Honor. Your Honor has made up your mind on the subject.

THE COURT: The motion will be granted and the jury instructed to disregard the testimony.

MR. COOK: Exception.

THE COURT: Exception allowed.

Whereupon the plaintiff rested. Whereupon counsel for the defendant made the following motion to the Court:

MR. SHANK: If the Court please, on behalf of the defendant, I move the Court at this time to instruct the jury to return a verdict for the defendant. My motion is based upon several grounds, one of which is that according to the testimony in this case the plaintiff has not shown that the defendant has made, used or disposed of any of this so-called patent; second, from the testimony as it has been adduced here before Your Honor it is clearly shown that the patent claimed by the plaintiff embraces no new and novel ideas and is not the product of invention; third, that in the development of this particular art it has been shown that it is old and the patent embraces nothing but old elements combined to produce an old result, and that what he has done has been nothing but to employ ordinary mechanical skill; fourth, that it is shown from the evidence here that the so-called patent of the plaintiff is not a usable device, and that the plaintiff himself did not use it; and fifth, that the defendant has not used the plaintiff's patent nor its mechanical equivalent, the testimony of the witnesses of the plaintiff being conclusively to the effect that our device is not a mechanical equivalent of the plaintiff's device as demonstrated by their own experts. I don't know to what extent the Court desires to hear from me on the authorities sustaining the positions which I have here stated, but I am prepared to produce to Your Honor this morning a line of authorities showing that in order to sustain a combination patent that combination must

produce some new result when the elements therein are all old, and the evidence we have now is that the elements are all old, and that they are combined to produce an old result, namely the concrete sewer of a circular form or other shape, as may be desired.

THE COURT: I don't think you need take time to argue, Mr. Shank. The motion will be denied and exception allowed.

DEFENSE.

Counsel for Defendant made their opening statement to the jury, whereupon HARRY GEORGE, called as a witness on behalf of the defendant, being first duly sworn, testified that he had been for a number of years in the navy, that his business of late years had been mining and mining engineering chiefly; that he was a graduate of the Naval Academy of Annapolis; had been an instructor of mathematics at the Naval Academy for about two years and a half, and had devoted the major portion of his time to work of an engineering nature in the service.

Q. Captain, in the study of the sciences, particularly mathematics, did there fall to your lot the general matter of estimating pressures that would be brought to bear upon cylinder forms or other forms of that character?

A. Very frequently.

The witness then testified that he had never made under any commission a full sea cruise for the simple reason that he had established a record for some interesting engineering work, and the navy long before the expiration of his cruise detached and ordered him on work of an engineering nature. That he had been out of the Naval Academy for 34 years and since that time he had been retained by the Southern Pacific Company on engineering work, also engaged by the Alaska Steamship Company to remodel and redesign two of their ships, the Latoosh and the Seward, and likewise been engaged on expert dry dock duty in New York by James Shewan & Sons, and that he was now engaged in his own work in Alaska developing some properties and mining.

The witness further testified he had examined the plaintiff's letters patent.

Q. Captain, I want to call your attention to figure 1 particularly, and ask you to state whether you can tell the bearing pressure upon that circle, assuming it to be $11\frac{1}{2}$ feet in diameter and surrounded by concrete 13 inches thick; can you?

A. Very readily; it is a—

MR. SHEPARD: I object to that as immaterial and irrelevant.

THE COURT: The object of it is to show its utility?

MR. KERR: To show it is absolutely unworkable.

MR. SHANK: The purpose of it is to show that this device can not be worked.

THE COURT: If that is your object, you may proceed. If it is merely to show it is not as good and workable a device as some other, that is a different proposition.

MR. SHANK: Not at all.

MR. SHEPARD: Exception.

MR. SHANK: The purpose of this inquiry, if the Court please, is to demonstrate by this expert that the device which they say they have patented can not be worked, is not a workable device. That is the object of it.

A. Looking at the transverse section of the Bassett patent as indicated by figure one in the specifications, it does not take very long for a man of engineering experience to see that there are a great many points that should require very careful consideration in the design.

The witness then testified that he made the copies of defendant's Exhibit "1".

Q. Now, Captain, taking that form of construction and using concrete 13 inches in thickness as the substance to be poured around it, can you state to the jury the pressure at the different points?

A. Well, gentlemen, the pressures are determined in this way: We may look on the cement, especially in its liquid—or concrete in its liquid condition, and figure in the same way exactly as an ordinary hydrostatic pressure, that is the usual procedure in engineering; for instance, in the construction of dams,

when we are determining, dimensioning a dam to withstand a certain head of water an analysis of that water is made to determine the presence of silt and the weights of silt at various depths are due to hydrostatic pressure, in other words, silt becomes a species of every liquid concrete; in this case we start in the mixture of the patent of the Colson Company, in actual weight it is determined that one cubic foot of concrete weighs 150 pounds; in other words, slightly more than a pound per square inch for one foot of depth; now, in considering hydrostatic pressures or the pressure of fluids or liquids or partial fluids or liquids as far as they can be ascertained by the ordinary methods of engineering, or by the progress of investigation to the present time, those pressures vary as to the depth; in other words, a curve of pressure, the actual pressure at any point, is a linear function of the depth of that particular point below the surface of the concrete, whether silt or whatever it may be, and it is a matter of absolute indifference as to what the particular curve may be, whether that is rectangular, round, elliptical, oval or any other shape, the pressure at a certain point, at this point at that joint, is the same whether this a triangular section, whether it be oval or elliptical; in other words, the pressure at the particular joint is a function, direct linear function of the depth of cement at that point below the surface of the cement when poured.

Q. Now, Captain, do you know the contents of that cement; it is made upon the basis of 1, 3 and 5, is it?

A. 1, 3 and 5.

Q. That is one part cement, three of sand and five of gravel?

A. Yes sir; of course I am going to take that up; I shall take up later, after I have gone through these principles, the subject of viscosity or flaccidity and show how those pressures vary as the cement dries out and obtains until it finally reaches a self-supporting form; now, in determining this curve of pressures, naturally we figure this point is 13 feet with a depth of one foot cement on the crown of the arch, this point, therefore vertically in this particular form 13 feet of pressure, therefore if the pressure is 150 pounds per square foot for one foot of depth on this theory that the pressure, which is the engineering principle on which all these problems are worked, varies directly as the depth, the pressure at this point will be approximately 1950 pounds, in other words, we will have 1950 pounds pressure at that particular point.

Q. That is per square foot?

A. Per square foot; therefore to determine the pressure at any other point on an assumed scale, without laying it off,—in this case it is 200 pounds to the inch, that pressure,—unite that with a line to the crown of the arch, any intermediate ring, at any height, at this joint it is this, there is another varying pressure as you go in depth, here is another,

here is another pressure, here is another pressure through this joint, there is the pressure at the bottom of the entire structure; in other words, by that means, instead of going into a number of separate calculations, you may determine the absolute horizontal pressure of the cement on that surface; now, there is a principle in engineering that the pressure on a point of a curved surface is absolutely entirely independent of the nature of the surface, but is a function solely of the depth; it is on this principle that a body of water such as a lake or any other body that is not subject to external force such as winds or currents, due to differences of hydrostatic height remains in equilibrium, otherwise it would have a constant ebullition of water; in other words, every particle of water is extended by certain radial force holding that particular particle in equilibrium. Now, to show these pressures more clearly, this represents the ordinary triangular force, that is the force polycone for this particular structure, but in order to show it I think more clearly to the mind of the jury I drew another diagram which we call a polar diagram, showing exactly what these pressures are graphically at the various points; in other words at this particular point this is the pressure, acting normally to the surface, that is also the pressure which you will see in this dotted curve, at this particular point at the next lower joint this pressure through that joint is this pressure out to the curve representing the lateral pressure which thrown through the joint is that pressure showing

exactly how the force acts; in other words, this initial diagram I constructed is merely a curve of force, but the polar diagram shows not only the actual mathematical value of the forces at the various points, but their directions; in other words, this is a more complete curve, and that clearly indicates the necessity for a strong and uniformly distributed system of bracing to maintain the symmetry of that shape against the external pressures of the cement. If I may look at that memorandum I will just quote from it.

Q. You made this memorandum yourself?

A. This is my memorandum, yes, these are some notes; I merely want to quote the pressure at various points; joint No. 1 we have a pressure of one foot of concrete 150 pounds; joint No. 2—I am counting around left-handed from the crown of the arch—430 pounds; joint No. 3, 900 pounds; joint No. 4, 1600 pounds, the bottom of the structure, the lowest joint or at least the middle of the invert section where the maximum vertical pressure obtained, 1950 pounds; that is for the cement in a monolithic casting, the cement being in and retaining for the time being its initial physical condition; now, the question of various liquids of different deposits and of various earths is a very complicated one, but I think in a short time I may be able to show you how the pressures would be arrived at under various conditions of flaccidity and viscosity; you see the bottom of cement construction as developed in the line of building large forms that

are self-sustaining, having in themselves the structural integrity to withstand heavy cement pressures that are due to monolithic castings, that is where the pouring is made in one operation, where we are working, as you undoubtedly have seen small undertakings taken up, such as walls and small retaining walls, where we just put in a plank and brace it and put in two inches of cement and let that set and then follow it up by another, don't you see in that method of pouring by successive increments, it becomes all heavy and stable forms, it becomes unnecessary, but in a form where the specifications require the castings shall be made monolithic, the external pressures are of primary importance in the design.

Q. You mean by monolithic where this entire form is made in one pouring?

A. In one pouring.

Q. That is a continuous operation until it is completed?

A. It is a case where we may look from an engineering point to all elements of this structure being subject simultaneously to external pressure of liquid cement, they are not successive increments which dry and become by drying self-sustaining. Now, the question as to what these pressures are; the very minimum pressure that could possibly be produced would be in the case of water in which the particle of water weighs less than cement or concrete or any ingredient of cement, and therefore the very minimum pressure, even assuming that

this was subjected merely to a hydrostatic pressure, the curve then would be simply the linear curve varying directly as the depth, but instead of running out to our outside pressure we would run out to about a third, something less than a third of the distance or about $62\frac{1}{2}$ pounds for water; in other words, there may be any number of processes of drying of this cement, in other words, theoretically during the process of drying our curve swings, in other words, when that line theoretically coincides with this vertical and this vertical plane on which these pressures impinge the cement is set and therefore during the process of drying we have any number of pressures, but in engineering designing, the structure should be so designed as to be able to withstand the maximum strains and stresses to which the structure is subjected by this external pressure, whether that pressure lasts one minute or a half an hour.

Q. Now, Captain—

A. I would like to go on for just a moment. Now, gentlemen, this is a difficult, somewhat complicated subject, but I think I may make it clear to you, but you know perfectly well, in coming down this morning from my house, we have had a good deal of rain recently, the ground is thoroughly saturated, I passed a certain bank giving way on a street that is maintained,—it is standing probably at an angle of 30 degrees vertical, this morning I find that cliff has slid and now you have to walk out in the street to avoid the dirt that has slid down; what is

the reason for that? The same reason that on account of the saturation and the absorption of the earth, with the particular volume of dirt of that cliff and the angle of repose changed, it cannot remain stable under the new conditions, and you all see that as evidence, any resident of Seattle, because we all have to get out of our way to avoid conditions of that description. Mr. J. M. Rankin, a very eminent Scotch engineer, was one of the pioneers on the subject of the determination of stability of various liquids such as cement, concrete and earths in connection with the building of dams and retaining walls, and also conducting some very classical experiments on the subjects of pressures of building on steep slopes, that is with respect to the possible movement of the earth on the slope on which the weight rests, so we might say that these pressures, while at the first pour—and the structure should be designed for a pressure of 150 pounds per cubic foot initial, we have this result, that we may determine, calling our pressure after the second or third hour or any subsequent hour “P”, we have this peculiar relation; this, derived mathematically and mechanically by experiment, is equal to the total pressure into one minus sine five say divided by one plus sine five (witness writing on piece of paper); now, that angle five is small, the angle of repose, for instance if I took a bucket of cement and concrete such as is first poured and dumped it onto that table that would spread out indefinitely, there would be no retention of form.

Q. Now, Captain, I want to get at the effect here, not quite so extensive as to the methods by which you arrived at it, if you please, because the effects are the matters with which we are here concerned. What I want is this: I want you to state whether you can determine and have determined the sustaining powers of this structure with this form of bracing, with that method of molding the concrete?

A. Yes sir.

MR. SHEPARD: If the Court please, we object to that as immaterial and irrelevant because that form of bracing is no part of the claimed combination in any of the three claims sued.

THE COURT: Objection overruled.

MR. SHEPARD: Exception.

Q. I would like for you to state, Captain, the direction of the pressure at every point in that structure.

A. The direction of the pressure at every point in the structure is always normal to the surface of the structure and is absolutely independent of the shape of the structure—normal to the surface; in other words, to determine the cement pressure at this point I will take some intermediate point that the pressure of that cement is radial; there is the line of pressure; it is in this point horizontal; on the lower point of the structure directly vertical.

Q. You mean by the pressure at the lower point it is up?

A. Upward; it is always pointed towards—pointed directly towards the center of the structure in the case of a circular form.

Q. The same would be true with reference to that joint—

A. That joint and every other joint.

Q. —here that has wedge 13 in it?

A. Yes sir.

Q. Now, what is the direction of that; towards the center likewise?

A. Towards the center, normal to the lagging, this joint, that line there represents graphically the force and this is its direction; there is the force acting on the joint which is marked there by the lower end of this segment 3, between which the longitudinal rib 7 and the sill 6 and the wedge 13 is imposed.

Q. Do you know, Captain, what the pressure would be on any sized sewer at this particular point?

A. It would be the function of the diameter of the sewer, the depth of the sewer; if it would be half that diameter it would be practically half the pressure.

Q. Now, I wish you would state to the jury what would be the action of this cement upon that internal bracing as it is there described.

MR. SHEPARD: Objected to as immaterial and irrelevant.

THE COURT: Objection overruled, for the purpose for which they have offered it.

A. The natural tendency—let us consider the load on any individual segment; the load on any indi-

vidual segment is the mean, in other words, the load on this particular segment, the external pressure, the resultant of the external on that particular segment which is marked 2, is due entirely to the external pressure of the concrete, that external pressure, as I have already pointed out, varies from a certain pressure at this point to a greater pressure at this, and therefore the point of application of the resultant, and therefore it has the value of the external force or the magnitude, I might say of the external force is a mean between the force at that point, but the point of application is somewhat nearer the lower point; I can describe how that is obtained.

Q. Now, state how that would act upon that internal structure as to whether that consisted of bracing that that form of molding concrete would stand.

MR. COOK: I object to that as the bracing is not a part of the claims.

THE COURT: Objection overruled.

MR. COOK: Exception.

A. That system of bracing as shown on this drawing would not stand—is not stable.

Q. Is not stable with that form of bracing?

A. With that form of bracing; in other words, there is no continuous and symmetrical system of bracing for sustaining the external pressures; the system itself from an engineering point is a bad one, but it has this fatal defect, that there is a load on every joint held by a wedge at a point sub-

jected to a very great external pressure; in other words, now to show mathematically how we determine this condition let us eliminate for the time being; here we have these series of forces; disabuse our minds of all the forces excepting the forces acting on this single segment, now, what is the condition? Now, there we have that segment, the upper edge of it is sustained by this horizontal member 8; the lower part of the segment has no radial support, there is merely a frictional contact with this wedge that is interposed between the lower longitudinal rib of 3 and the champered-off or angular face of the sill which is marked 6; in other words, we have this condition; we have a pressure at the upper end of that segment, we have a certain pressure at this point, whereas we get at joint No. 3, 900 pounds, at joint No. 4, 1600 pounds; in other words we have a variation of load between from 900 to 1600 pounds between those two points; the mean force is 1320 pounds per square foot, the average force, but the point of application is determined by first of all, which I have not down here, it is somewhat complicated, platting those forces to scale and noticing that one element of force is that rectangle is all along the center of gravity; the center of gravity of a triangle is two-thirds its vertical height of the vortex, and therefore this resultant force is the result of two forces, one the constant force represented by this rectangle 900 pounds, the other a difference between

900 and 1600 pounds, which is the varying force it will withstand.

Q. I want to get at just how that would act; not so much in detail the method by which you arrived at it, Captain.

A. The result of this external force—there is the external force of 1320 pounds per square foot and that is the actual point—that is the magnitude of the force and there is the point of application and there is the direction of that force.

Q. Now, on a sewer $11\frac{1}{2}$ or 12 feet in diameter and a section sixteen or twenty feet long, would —“3”, stand against that sort of a pressure?

A. It would not.

Q. The result would be then a collapsing of the inside of that?

A. In other words this segment would apparently radiate about its point of support and thrown inward and take up this position with a free access of the cement to the interior of the structure.

Q. Now, take for instance the matter of wedging there; could you insert a wedge there; could you insert a wedge there that would hold that pressure?

A. I think not; in other words, you drive the wedge so far that you would bring an unnecessary restraint on the restraining ring and so hard that you would deform the lower portion of segment 3.

Q. Now, what would be the effect of this load on this set of bracing here with reference to standing up in that form; would it stand?

A. That is very badly distributed; in other words, there is one criterion—engineering criterion necessary in my opinion in a form of this sort, and that is that there should be a symmetrical system of support to produce a symmetrical—a very symmetrical system of stresses, that is if we localize forces we destroy and throw this over out of symmetry; now, if we take the entire load of cement under the crown of the arch we find that entire load is transmitted by way of the vertical post 7 to a certain horizontal beam called in the patent specifications sill 6; now, you can see the whole load, this portion of the crown of the arch between those two elements is carried by 7 and is transmitted by the vertical post 7 directly to the center of 6; the horizontal forces as far as 7 is concerned have no mechanical effect other than merely squeezing those transverse fibers; resolving the forces on 8 into their components at right angles to and in the direction of 7 we find that the forces on 8 are dissipated in the compression of fibres of 7 and 8 and also transmitting a certain percentage—in other words, to clear it up the pressure on that point is equal to the whole pressure—is equal to 2.42 times the pressure on any of those individual pieces, the pressure is all localized instead of being distributed is localized at a certain point on a member that is subjected to bending.

Q. Now, with that explanation that the pressure is localized at the lower end of sill 7 upon the cross sill 6—

A. "6".

Q. What is the natural effect upon 6?

A. The natural effect is to dish 6, because we have still another system of vertical forces.

Q. Does that have anything to do with reference to tightening the invert segments?

A. Nothing at all; it spreads the invert segments and opens the joints.

Q. Now, Captain, in driving wedges 13, supposing one only was inserted, what effect would that have upon the segments in the upper portion of the—

A. In driving the wedge 13 on this side?

Q. Yes, on one side.

A. That would—the general tendency would be naturally to tighten up these individual joints successively; in other words it would have a mutual action and reaction of every joint and although the action and reaction would be ultimately the same, through the engineering tendency, it would slightly slide that because it is resting on a curve, you couldn't drive down on one end without forcing the other up.

Q. Would the driving of 13 at this particular joint or the two wedges at these two joints have any effect on tightening the segments in the invert?

A. Not the slightest; here is the force; this represents graphically the force imparted to the segment 3 by driving the wedge 13, on this side this is the corresponding force imparted to segment 3 by driving wedge 13 on this side; we know that

there must be a corresponding pressure on the other side of the wedge on that sill, that is dissipated in merely compressing the sill and in driving there is the other vertical component by driving that sill against the inner surface of this invert segment marked 4 on either side.

Q. Captain, you say the pressure at this point on that sort of sewer construction would be 1950 pounds?

A. Approximately.

Q. Now will that system of bracing sustain that pressure?

MR. COOK: I object to that. The bracing is not a part of the claims.

THE COURT: Objection overruled.

A. It will not sustain—it will not properly sustain that pressure and on account of the bending moments—

Q. And what effect will it have on the different members?

A. It will distort and produce a lack of symmetry in the finished casting; the joints are straight, these forces which should be rigid are dissipated in useless bending moments, and I think, if there are any mechanics on the jury, we should never include a bending moment if you can get the direct joint support; the tendency is to spread and render unsymmetrical if not endangering the individual segment.

Q. Now, Captain, I call your attention to figure 2 and ask you to describe to the jury the mechan-

ical differences, if any, between the interior bracing shown on figure 2 and that shown on figure 1 of defendant's exhibit "1".

MR. SHEPARD: Objected to as immaterial and irrelevant and because the interior bracing, neither one nor the other is any part—

THE COURT: Objection overruled.

A. Well, in comparing the—

MR. SHANK: Let me understand. You don't make any claim to the interior bracing at all?

MR. SHEPARD: Not as an element of the patent; we haven't all along.

MR. KERR: You make no claim to the segments and you make no claim to this restraining band?

MR. SHEPARD: We claim the restraining band.

MR. SHANK: What do you claim?

MR. COOK: 1, 5 and 6. The interior bracing is not described or claimed.

MR. SHANK: You mean then that this interior bracing may be removed and you still have a patentable device?

MR. SHEPARD: No, we claim one may adopt any style of bracing that he wishes, that the bracing is not an element covered by the patent.

MR. SHANK: Well, what do you claim?

MR. SHEPARD: We claim the patented combination, 1, 5 and 6.

MR. SHANK: What do you claim; do you claim the templet is patented?

MR. SHEPARD: No, it is the combination.

MR. SHANK: Do you claim the segments are patented?

MR. SHEPARD: We claim the combination of 1, 5 and 6.

Q. I would like to have you state to the jury the mechanical differences between figure 2 and figure 1 as they are shown and illustrated on Defendant's Exhibit "1". You have stated with reference to figure 1. Confine your explanation to figure 2, if you please.

The witness testified that the restraining ring in plaintiff's design was one single continuous ring, whereas in the defendant's design the restraining ring was built in two halves, each half stiffened by a horizontal brace of timber for the easy transportation and retention of shape while in use; that the plaintiff's ring was cumbersome and hard to handle; and when set up on edge in assembling a section was liable to sag.

Q. Proceed further.

A. I will now take up the invert segments; these segments are shown here, "B", "C", "D" and "E" in figure "2" and numbers "4" and "5" in figure "1". In general, especially looking at that superficially, those segments are of similar shape, those segments are of similar shape, but there is a marked difference. In the second place, on this drawing there is a mechanical difference in that the longitudinal ribs of the invert segments at one end of the segment project beyond the face of

the transverse ribs for a distance one-half the thickness of the transverse ribs.

Q. You are now referring to that particular feature which we term the interlocking device?

A. The interlocking device, which will be entered into more fully later.

Q. Now, proceed further. What is the other difference?

A. The other differences which are clearly shown on the drawing in figure 1, I notice that the inner surface or the inner outline of these invert segments when assembled form a circle concentric with the center of the section and so designed that the diameter of that circle or its radius is precisely similar to the external diameter of the segments above the invert, allowing what is claimed in the patent, which will be referred to later, as a peripheral motion of the segments three upon the outer segments four on each side.

Q. Within the segments?

A. Within; in other words that arc of the circle there outside the lagging of the upper segments 3 coincides and is struck with the same radius of the other arc outlining the invert segments marked 5 and 4.

Q. That is the portion of the patent then referred to wherein it says that the invert segments are placed enough further from the center to permit the segments of the upper part moving peripherally to move within the segments of the invert?

A. Exactly.

Q. Proceed, now and give us the difference with that on the other.

A. On the other we notice that instead—there is no effort made to admit of any such peripheral motion; in fact by the shape of these segments such a peripheral motion is carefully avoided; instead of the inner edge or the inner outline of these contours being in the arc of a circle there is a series of short boards that are built up and the segments are then necessarily stiffened by the purely circular outline, then some stock—on the other end there is a large amount of stock left on the outer ends of the outer invert segments marked “E”, in order that there may be a secure mechanical abutment for the lower ends of the longitudinal segments above the invert.

Q. Now, on this figure 1 I believe you stated that the insertion of wedge 13 had no tightening effect upon the segments in the invert, but had a tendency to loosen them?

A. To loosen them, to spring the segments from 4.

Q. What have you to say with reference to the driving of the wedge at any joint of the segments in figure 2 with reference to the effect which that would have upon the segments of the invert.

A. The mechanical combination of the segments of the invert with the segments above the invert is radically a total difference.

Q. Just state what it is.

A. It is this: that by setting up these wedges

and wedge marked “Q” in this drawing or “13” in that drawing—

Q. That is “Q” in figure 2?

A. “Q” in figure 2 and “13” in figure 1; in the one instance in figure 2 it imparts the peripheral motion tending to tighten up and expand out against this restraining ring every and all—each and all segments forming the entire circumference; in the mechanical combination shown in figure 1, setting up that wedge produces a dissipating effect upon the invert segments and only exerts or imparts a peripheral motion and tightens the joints of those segments that lie above the invert, of those segments only.

Q. Now, Captain, what would be the effect with reference to the segments of the upper part in figure 1 if you could remove all of the interior bracing?

A. If you removed all of the interior bracing the system would naturally collapse for the simple reason there would be a sliding motion without support of these lower segments on the concentric segments of the invert, which would be followed by every other segment—there would be a total collapse of figure.

Q. What would be the effect, if any, upon the segments of figure 2 after it was set up if you should remove all of the interior bracing?

A. We could remove all of the interior bracing and still preserve the integrity of the figure because we have an interior segment ring and ex-

pansion by the wedge marked “Q”, which is entirely independent of any system of interior bracing.

Q. Now, Captain, I direct your attention to the system of bracing in the invert and ask you to describe to the jury the difference between these two systems of bracing. First let me ask you before you answer that question: Is this system of setting up the segments in figure 2 in any wise a duplication or a mechanical equivalent of the setting up of the segments in figure 1.

A. It is not in any shape or manner.

MR. SHEPARD: I object as not competent.

THE COURT: Objection overruled. He is testifying as an expert as I understand.

MR. SHEPARD: Or not material.

A. (Continuing) It is not the mechanical equivalent. It performs—setting up the wedges in the respective cases performs entirely different mechanical functions; in the one case—

Q. Does it produce the same result?

A. It does not.

Q. Is it operated in the same manner?

A. Not in the same manner and does not produce the same result.

Q. Then proceed to the next.

A. In this figure, as is already shown, the setting up of wedges “Q” produces a stable figure independent of any bracing, jog, sills or any of this interior details as shown on the drawing; now, when these wedges—

Q. First before you take up the system of wedging please take up the system of bracing. What is the condition of the interior bracing of figure 2.

A. The condition of the interior bracing on figure 2 is this: that by driving—

Q. Is it in one piece or two pieces?

A. It is in a single piece; that is there are two pieces, but interlocked by horizontal braces, but on account of the entire ring being in a state of compression, when these wedges are driven the point of contact is in absolute compression, and so for all intents and purposes that ring when subjected to an exterior pressure, as it is by those wedges, is compressed tangentially and thrown in a uniform state of compression; in other words, that ring, gentlemen, is the mechanical equivalent not of this drawing in any way, shape or manner, but it is the mechanical equivalent of a system of radial bracing having an infinite or indefinitely large number of radial braces.

Q. What you mean by an indefinite number is this: that if you were to take and set braces in figure one solidly all the way around the bracing in figure 2 would be equivalent to that?

A. It would be the equivalent; we would have the counterpart exactly.

Q. Now, Captain, proceed and state what the different elements are in the bracing there that is different from the bracing in figure 1.

A. In this system of radial bracing, I will not

again refer to the defective features of these elements which I pointed out this morning, but now suppose we in pouring cement and so forth, if the cement is not symmetrically poured and we have not a uniform and equal lateral pressure on each side, suppose we pour a greater amount of cement for the time being and have a little unnatural pressure, the tendency would be to spring in a radial brace.

Q. In other words, you mean pushing it out of shape?

A. Naturally; and on the other side that being imparted there the bending of this would be transmitted in an opposite direction to the other element, that might loosen it very easily, some of these adjusted radial braces, and the result would be that the figure, the contour would not at that particular time be symmetrical, that is it might be wavy or distorted; but on the other hand as we drive the wedges marked "M" in this figure—

Q. In figure 2?

A. In figure 2—between the segments and this supporting ring I call the interior supporting ring, whether one or a dozen wedges is driven it imparts a tangential, a peripheral, I would call it tangential, which is a peripheral, stress to every fiber in that ring; in other words, that ring is thrown in a state of compression, the compression on the inner fibers being greater than the compression on the other fibers and the compression may be such that even if this figure 2 is surrounded by a maximum pres-

sure of liquid cement the ring as shown on this diagram will amply support the external radial pressures of cement and maintain a symmetrical or circular outline for the center without unduly straining the fibers of the ring itself; in fact there would be a large factor of safety, a factor of safety of four.

Q. What effect, if any, does it have with reference to the tightening of all of the segments when you drive the wedge at any joint in figure 2?

A. It tends to set every segment, expands every segment out against—

Q. Will the driving of any wedge at any of the points mentioned in figure one have any such tendency?

A. No, because you have this—a bad feature of the buckling and distortion of this ring; this is a pure follow-up motion; the tendency of driving the wedges in is first of all to set every segment out against the ring, but in this diagram on account of the independence of the wedge “Q” being entirely independent of any element of bracing, we always have a follow-up motion to make up for any slackness of joints which might be imparted in the other drawing.

Q. I direct your attention now to the bracing figure “B” in figure 2 or rather part “B” in the figure 2 and ask you to describe the mechanical differences, if any, existing between that form of bracing and the same bracing or bracing in the same place in figure 1, that is in the invert.

A. In figure 1 the external pressure of the cement is imparted to the sill 6 through these vertical blocks marked 10; those vertical blocks themselves are mechanically bad for the simple reason that as this external radial force, this pressure of cement, that is radial to the surface, the actual force at those points is not in the direction of a vertical axis, but of a small angle thereto, that force may be then resolved into a vertical, radial force having horizontal—

Q. Not quite so much in detail. Give us the result.

A. In other words, one tendency would be to capsize those blocks ten.

Q. All that would be required then to capsize blocks 10 would be a sufficient amount of force?

A. A sufficient amount of force and a small friction; it depends on the character of the point of contact.

Q. Could you capsize any of the bracing in figure 2?

A. No, because, as I said, this is equivalent to an indefinitely large number of radial braces, that would be equivalent to a number of blocks 10 set solidly supporting every square inch of those invert segments, and it is so shaped that it is largest at the center or where the bending motion is the greatest, in other words, that is just like a girder of bridges.

The witness then testified that the system employed in figure 2 in the invert was not the me-

chanical equivalent of that in figure 1, nor did it perform the same work, or operate in the same manner, and further that not an element in figure 2 found its counterpart in figure 1.

The witness then proceeded to point out the respective elements of claim 5 to the jury.

Q. Now, Captain, I want you to take this loose segment and see if you can apply it to the end of model "J", of Exhibit "J", so as to illustrate to the jury the engaging of the outer skin as well as also of the longitudinal ribs.

A. Of course this is a very old device; I suppose everybody has seen this interlocking; this is the interlocking; in other words the male ends as to how you would engage depends on which end of the section you are facing, the male ends go into the female recesses, into the other figure, the male lagging overlaps and lies on top of one-half the transverse rib in that section, producing—tending to produce a tight joint.

Q. Is there any peripheral motion possible with that segment engaged in that manner?

A. There is none; there can be no peripheral motion for the simple reason that the section when assembled is rigidly bound in one definite and unvarying relation with a similar section that has preceeded it in the form just cast, therefore having been held—being held rigid in position, there can be no motion with those interlocking features.

Q. Assuming then, Captain, that a section of the sewer has been constructed, the inner bracing has

been taken out and the form next adjoining it set up, is it possible to set up those segments, assuming that the new form that is to be set up be of dry segments and the form that has just been set up be of wet segments?

A. It would be impossible to, in the first place, impossible to make the engagement which I have just exhibited; second, where the engagement was made a peripheral motion would be a physical impossibility.

The witness further testified that the lower bracing within the invert on defendant's Exhibit "K" was dissimilar to the bracing within the invert of plaintiff's Exhibit "1" as pointed out in claim 6, and that the one is not a mechanical equivalent of the other.

Q. I direct your attention to Defendant's Exhibit "G" for Identification and ask you to state whether it would require any particular mechanical skill for any one to take that exhibit and make the forms with which to receive the concrete?

A. My opinion is that from an examination of this drawing which has been presented to me I should say that the production, design and manufacture of the requisite forms to reproduce those special sections with fidelity would come within the purview of the ordinary and experienced pattern maker of average ability.

Q. Speaking generally now as to the form and manner of setting up and the manner of operating can exhibit "J" be operated with greater speed

than Exhibit "K"—exhibit "J" be operated with as great speed as Exhibit "K"?

MR. SHEPARD: We object to that as immaterial.

A. Exhibit "K" in my opinion—

MR. SHEPARD: Exception.

A. (Continuing)—can be operated with much greater speed and economy than the smaller figure model "J".

The witness then testified on CROSS EXAMINATION that he had had very little practical experience with concrete construction; that pressure starts to diminish from the moment the concrete is poured; that he did not know the weight of a 20 foot section made of the ordinary plank.

Q. Wood an inch and half in thickness is stable stuff, isn't it?

A. Yes sir.

Q. A form of that weight and thickness of planking and the rest of it would stand considerable pressure, would it not?

A. No, not the pressure that would be brought on it; the forms must be designed for the maximum pressures that are apt to be brought on; I don't care whether you have thin or thick, they have to be designed in a certain way, and unless they are designed and supported and braced in that way they will not sustain the external pressure.

Q. But in actual practice, even if there is a heavy pressure here at this point we will say half way up the side, the bracing would prevent the

crushing in at any particular point, would it not?

A. It would not in a joint of that nature, any ordinary pressure would pivot that in; would collapse that form; there is an absolutely free, unsupported joint.

Q. Now, will you please take a pair of compasses which I hand you and—you say this upper end of the segment would act as a pivot?

A. Yes sir.

Q. And swing down here when you get half way up to the pivot?

A. Yes sir.

Q. Strike an arc from the pivot; just take exactly to the end of the segment.

A. Of course it depends on how much you cut away that sill and what the thickness of that wedge is.

MR. COOK: That wedge is the same as the segment in the drawing.

THE WITNESS: It has nothing to do with the case at all. That wedge will be forced out and that end will be thrown in there or overturned or capsize the sill itself; of course to release the pressure will practically fill the interior of the form.

Q. The arc I take it here on the drawing indicates the line on which the segments could be moved on the upper end of the pivot.

A. It might if the segment preserved its rigidity; if it filled up there would be an opening for the passage of cement along that segment; in other

words you would have a broken longitudinal joint as a collapsed joint.

Q. It is a well understood principle of mechanics, which everybody understands, is it not, that two bodies cannot occupy the same space at the same time?

A. I concede that.

Q. That pressure being inward would it not tend to press against this wedge?

A. It would; at the same time it has a tendency to slide over; in other words, it might entirely slide over despite that wedge.

Q. How would it be possible to slide over when there is not room enough?

A. When it is absolutely not rigid—wood; it is not steel construction.

MR. COOK: It can be steel though.

THE WITNESS: Even using wood or steel that joint might be opened.

Q. It would press that wedge against the cross sill, would it not, with the pressure from the outside against the segment?

A. Yes, pressure acting in this direction would press that in the arc of the circle; in other words, the tendency would be to carry the wedge with it; those wedges are only at certain points, there are only four or five of them in the entire 20 foot section, you have the large unoccupied spaces which have no support at all.

Q. When they are driven in and driven in tight they could not be displaced without displacing the whole thing.

A. The wedges themselves can be displaced; wedges are frequently displaced by exterior pressure, absolutely displaced.

The witness then testified that there was a mechanical difference in the design of the two rings, in that the ring in two pieces always preserves a circular form, whereas it is constantly varying in the other.

Q. I want to call your attention to the fact that the model is not an exact representation of the drawing. Now, is it not possible to make these longitudinal ribs and segments broader and thicker in proportion to the width of the segments than they are?

A. Of course it is, they might be made any shape whatever, any depth.

Q. That would give additional strength, would it not?

A. Any increase in the dimensions of either the transverse or longitudinal ribs would certainly make the segments intrinsically stronger, yes.

Q. Now, a cylindrical form or a circular form is the strongest mode of—the strongest way of resisting any external pressure, into which you can put the same amount of material, is it not?

A. It is for the simple reason that the external forces are not all concentrated at the same point,

in theory assuming that the external forces are uniformly distributed around the circumference.

Q. But if the external force is on the top for instance it distributes the pressure, the continuity of material distributes the pressure all around, does it not?

A. It certainly does, but the material must be sufficiently rigid and have sufficient cross section to support the stresses thrown upon it.

The witness then testified that the driving of the wedges 13 gave peripheral motion to the segments above the invert in the plaintiff's design, whereas the driving of the wedges 13 in the defendant's design gave peripheral motion both to the segments above and below the invert.

Q. When the wedges are driven down it tightens the sill, does it not?

A. You can't transmit—

Q. If you will please permit me, sir, to finish my question, then you will be able to answer me comprehensively. These outer members 4 of the invert being rigid, when pressure is brought to bear upon them it will tend to transmit it along and tighten them along the central part?

A. No, it does not, for the simple reason that sill 6 merely rests on top of 4; if they were mechanically bound then the driving down and lowering 4 bodily would tend to bring a pressure on those joints, but that is a loose joint, it merely rests by frictional contact, it is not original mechanical con-

tact, and it does not exert any tangential pressure or motion at all to the invert segments.

Q. The actual pressure tends to press it down, does it not?

A. Yes, but I say the joint is frictional, a sliding joint.

Q. That accomplishes the same effect?

A. It does not; it is dissimilar; it does not accomplish it because it is a sliding joint; were it not a sliding joint it would tend to produce the same result, instead of sliding over it it would carry the segment with it.

Q. A sliding joint may have pressure enough against material like rough lumber, not like boiler steel, so that it will transmit the pressure, will it not?

The witness then testified that it might but joints of that kind are not considered good engineering.

Whereupon HENRY W. BASSETT, the plaintiff, was called as a witness on behalf of the defendant, and testified as follows:

DIRECT EXAMINATION.

BY MR. SHANK:

Q. Mr. Bassett, did you ever see Reid on "Concrete and Reinforced Concrete Construction"?

A. I have read some in the "Engineering News"; I never saw any particular work on it.

Q. Did you not borrow from Mr. Arthur H. Dimock, at that time the Superintendent of Sewers or the Assistant City Engineer in charge of sewer construction of Seatlte, his work known as Reid on "Concrete and Reinforced Concrete Construction"?

A. I believe I saw the book one time, I don't think I asked him for it; I think he brought it out.

Q. Brought it out to you; and he brought that book out to you at the time you were building your north trunk sewer, didn't he?

A. I think it was after we were pretty well along with the job.

Q. Is it not true that you had this book in your office on the job during the course of that construction?

A. I think it was there during part of the time.

Q. And during the time you were experimenting and trying to find out the method by which you would sustain these forms?

A. No, I don't think so.

Q. You don't think so. Well, how long afterwards was it that you had this book?

A. I don't remember just what time; in fact I don't recollect looking it over very much.

Q. Don't you remember looking this over yourself; don't you remember looking this over in the presence of Mr. George Worley?

A. I don't think so; I may have.

Q. In your office? You may have?

A. I may have.

Q. And this was the work that you were looking over? I hand that to you. (Handing witness book.)

A. I presume probably it was; I wouldn't be able to identify it.

Q. Now, Mr. Dimock, the present city engineer, is the one who brought that book out to you, isn't he?

A. I believe so; he might have brought it or he might have sent it out.

Q. Now, that was about a year and a half prior to the time when you made an application for a patent, wasn't it?

A. I couldn't say what time it was.

Q. About what time was it in your recollection?

A. I think it was some time along the middle of the summer, 1908.

Q. Would you say that this volume I hand you was the volume you saw out there?

A. No, I wouldn't say it was.

Q. Would you say it was not?

A. I wouldn't say it was not, no sir.

Q. What is your best recollection about it?

A. I believe and presume that it was.

Q. You believe that it was?

A. I think so.

MR. SHANK: I offer this book in evidence, now, if Your Honor please.

MR. SHEPARD: The same objection as before, Your Honor.

THE COURT: The same objection is not tenable, as before. If that is the only objection you have, the book will be admitted.

MR. SHANK: With permission to substitute a copy, Mr. Shepard, it need be.

MR. SHEPARD: Exception.

Book referred to admitted in evidence and marked Defendant's Exhibit "N".

Whereupon GEORGE B. WORLEY, a witness for the defendant, was sworn, testified that he was superintendent of construction in the Interbay District, north trunk sewer, and that he held that position for a little over four years, for the city; that he was at that time engaged in the construction of a sewer under the City of Seattle, and that he had had engineering experience about 33 years; that he started to work for the city first in 1893 and had worked for them at different times; that when he went to work for them the last time he was detailed to look after the construction of the north trunk sewer, that branch of it under the Grant Smith contract, from May 1, 1908 to June 15, 1911.

The witness further testified he was out upon the work at the time the Grant Smith Company began construction, and that Mr. Bassett the plaintiff was superintendent of the Grant Smith Company, only spent a few hours every morning upon the work, and that they did not seem to be able to work out a system of holding the segments; that he recommended Mr. Fitts to Mr. Bassett, as a man who

understood that work; that he later introduced him to Mr. Bassett.

Q. Did Mr. Bassett offer any suggestions at all with reference to the manner in which you should handle that?

A. He just turned it over to Mr. Fitts then.

Q. Now, go ahead. And Mr. Fitts and the crew set up the first segment, did they?

A. Yes sir.

Q. Now did they use this system of bracing shown in figure 1 of Defendant's Exhibit "1" or shown also in Defendant's Exhibit "J"?

A. Why, they used a bracing something similar to that.

Q. Well, did they use that kind of bracing?

A. Yes, they used—

Q. Did they use this cross bar here?

A. They used a cross bar there I think.

Q. Did they leave these joints here at welge 13 without any brace at all?

A. I should say not.

Q. Did they have any cross bars running across it all the way?

A. Well, it was only a small sewer.

Q. How big?

A. Seven feet.

The witness then testified that the segments first sent out were too large, and had to be reduced; that changes were made from time to time, and that he had never witnessed Mr. Bassett offering suggestions; that each carpenter would brace his sec-

tion as he saw fit, and that he later approached Mr. Bassett and informed him that he would have to make greater progress with the work, and that Mr. Bassett requested him to get some one to help him out, and that later a man by the name of Paley—

A. (Continuing) —asked me if I had charge of the sewer. I told him I had charge of the construction of it for the city, and he said he had been up there looking at them putting in concrete, and he asked me if that was the system they were going to use right along; I told him I thought it was; I says, “We may make some improvements on it, but that is practically what they are going to do, put up the wooden forms and pour the concrete into it.” “Well”, he says, “I could beat that.”, “Well,” I says, “you are the man that Mr. Bassett is looking for,” I says. “He told me the other day to see if I could get a system of bracing there or do anything that would help him out and”, I says, “I think you are just the man that he is looking for, so”, I says, “you better go over and see him”; he wanted to know where he was; I told him his office was right over there by Ravenna Park and I says, “I don’t know whether he will be there now or not, but you can go over and if you don’t see him, the first time I see him I will speak to him about you”; I don’t know whether he went over or not, but the next morning I seen Mr. Bassett and I told him, I says, “That man up there on the hill”—I asked him if he had seen anybody and I believe he said no, I guess he didn’t see him, he said no, I know

he did, and I said, "That man up on the hill there said that he could get up a system of bracing that—so we can be able to get our forms through so we can go right along with our work, but", I says, "he wants to make it out of steel", I says. "He is some kind of a steel worker or blacksmith or something working down here I think in the shipyard, down at Moran's I believe, somewhere down there", I says, "but he wants to make it out of steel", I says; "I ain't sure but what that would be the best way anyway to make it out of steel". "Well", he says, "you see him and get him to make a drawing, get him to put what he wants to do, get him to put it on paper and then we will talk to him." I says, "All right, I will"; I seen Mr. Paley the same day and asked him if he could—or rather I was going to take him down to the City Engineer's office and get a draftsman down there to line out his ideas; he said he could do it himself and I said, "All right, go ahead and do it and when you get your ideas on paper then Mr. Bassett wants to see you", and he did so, and I don't know whether he gave Mr. Bassett the plans himself or whether he gave it to me and I gave it to Mr. Bassett, but anyway Mr. Bassett got a plan from Mr. Paley.

Here the witness testified that Bassett told his foreman to furnish Mr. Paley with sand, gravel and cement with which to mold a section of concrete form, and that the same was molded, and that this material was furnished by Bassett.

Q. Now, that was about the time you had the first section of the 11½ first sewer constructed?

A. That was along the latter part of July or the first part of August, 1908.

Q. That was the very beginning of your construction work out there?

A. Yes sir.

Q. Now, after that plan was submitted by Mr. Paley did Mr. Bassett do anything further with reference to having it perfected so far as you know or a form made?

A. Well, now, Mr. Bassett and Mr. Paley had two or three—

Q. You personally don't know anything about the details of that; is that it?

A. They had two or three conversations about it and I don't know just what agreement they come to, but Mr. Bassett finally asked me if I was satisfied with it; Mr. Paley's form did not have any braces at all in it, it was made out of steel and just had ribs and angle irons, angle irons that were riveted on each segment, when they were laid in place they made a continuous circle, and they were put about every foot and a half apart or something like that, I don't know how far. Mr. Paley figured it all out, figured what pressure they would stand and what they would weigh and everything; Mr. Bassett asked me if I was sure they would stand the pressure, I told him I didn't think there was any doubt about it, but that we would take it down and show it to Mr. Thomson before we

did anything on it and see what the old man thought about it, and we did take it down one evening, I got Mr. Paley to come down there with it; I was living in West Seattle then; we met there at the city hall and we went up to Mr. Thomson's office and he looked it over and we explained it to him and he thought it was a pretty good thing if it would work all right, so the next day I told Mr. Bassett that Mr. Thomson said the form was all right; still he would not—Mr. Paley would not say just what the cost would be and he was not satisfied in his own mind that it would hold up the concrete and, "Well", I said, "the easiest way to find out would be to make a model"; he says, "I think so to", and he says, "I could get a model made down at the Pacific Coast and it would not cost me much, the Pacific Coast Machine Works down there"; I says, "I don't believe Mr. Paley would want to do it that way, but I think if you would buy the material that Mr. Paley would make it himself", I says, "He can do it himself if you would buy the material, I think he would make it himself"; "Well", he says, "you see him and you tell him that I will pay for the material and pay for his actual time while he makes the model—makes a model"; and the model was to be one-quarter of the size of the regular section that they were putting in, that would make it just about the size of that one over there.

Q. That is Defendant's Exhibit "K"?

A. Yes sir; that is one-quarter of 12 feet and the other one was one-quarter of $11\frac{1}{2}$; everything was to be made to scale so there would be no question but what by figuring the different members as you increased the size, if the smaller one would stand, the larger one would stand; so Mr. Paley went to work and made the model, I think it took him something like a month or six weeks, when he got the model made and brought it up to his house I told Mr. Bassett that Mr. Paley had it up there and he told Mr. McLean; Mr. McLean was the foreman there on that sewer. (Witness excused.)

Whereupon JOHN PALEY, called as a witness on behalf of the defendant, being duly sworn, testified that he resided in the City of Seattle; that he was a ship builder by trade and that he had had an interview with George B. Worley with reference to forms to be used in certain concrete sewer construction, and also with Mr. Henry W. Bassett in July 1908.

Q. Mr. Paley, with reference to the beginning of the sewer construction made by the Grant Smith Company, what have you to say as to the time when this conference took place?

A. Well, when the Green Lake section of the trunk sewer was let and I happened to live on the line of survey and I wondered how they were going to construct this sewer, as I had never saw any of this construction work before, so I thought I would, having a mechanical instinct, I thought I would try and figure out some way, the most economical

way to construct this work, so I went to work and I drew up a small or rather a rough pencil sketch—

Q. Now, was that before they commenced any construction work at all?

A. No, about the time that they started; oh, yes, that was before they had started the construction work, yes sir.

Q. Before they started the construction work?

A. Yes sir.

Q. Go on and state.

A. And after I had my pencil sketch developed I thought I would wait and see what system that this Grant Smith was going to build this sewer with, so when they put in their first section of concrete, which I think was put in the University campus, if I am not mistaken, I think that was about where it was, I watched them erect their first form and I thought at the time when I saw it that it was not any way a practical system to what my idea of the construction would be, but any way, I said, "I will wait until they get through and then I will see how it comes out", but in the meantime, I saw Mr. Worley,—at that time I didn't know the man, I never knew his name—so I stopped him and asked him if he had any connection with this sewer construction, and he told me yes; "Well," I says, "is this the way they are going to construct this work?" He said, "Yes." "Well", I said, "I believe I have got a better plan than that, a better scheme." He asked me what it was, so I took a pencil out and I explained to him as near as I could with a rough

sketch. He says to me, he says, "Well, you better get up a good plan," he says, "and in the meantime," he says, "I will introduce you to Mr. Thomson," then our city engineer, "and I will talk to Mr. Bassett", he says, "Mr. Bassett is in charge of this work"; so I says to him, I says, "Well, would you give me a plan that I could go by to get the exact sizes and the dimensions of the construction?" So he says, "Yes". So the following day he gave me a cross section of the plans issued by the city so that I could get the exact measurements, so I took it to my home and I developed the drawing from it and I took it down to Mr. Worley and when he saw it he say, "Will you meet me tonight and I will take you down to the City Engineer's office, Mr. Thomson", and he says, "I was talking to Mr. Bassett about it and told him that you were just the man that Mr. Bassett was looking for", so I says, "All right"; so we went down to the City Engineer's office and Mr. Thomson looked it over and approved of it, he says it was a very good idea.

Q. That was at the very beginning of the construction work?

A. That was the very beginning of the construction work.

Q. Now, Mr. Paley, did you after that have a talk with Mr. Bassett?

A. After that, yes sir.

The witness then testified that he submitted a sketch to Mr. Bassett and was asked what he would charge to make a set of six steel forms which he

stated at the time he couldn't give. The witness further related that he and Mr. Worley talked over the matter, and that Mr. Worley suggested that he have made a working model, so they could demonstrate it to Mr. Bassett for his approval. After the model was constructed the witness stated, Mr. Worley made an engagement to have Mr. Bassett inspect the form, and that Mr. Bassett had accompanied him, his engineer Mr. Marion; that they looked it over, and that Mr. Bassett said: "Mr. Marion this is a pretty good form." "Yes," Mr. Marion said, "but we have got considerable wooden forms made now; I like that idea", he says, "that is the best scheme of form that I ever saw;" and that they went away and that the next time they came he came with one of his foremen. The witness further testified that he never saw Mr. Bassett any more for a long time, and that one day Mr. Bassett saw him and informed him that he was infringing his patent.

Q. Mr. Paley, did you ever take a photograph of those forms and of the mold after the form was made?

A. Yes sir.

Q. I hand you a photograph and ask you to state if that is a correct photographic reproduction of—

A. Perfect.

MR. SHANK: I offer this in evidence.

(Photograph handed to counsel for plaintiff.)

THE COURT: Photograph of what, Mr. Shank?

MR. SHANK: Photograph of the Paley model.

Q. I hand you another photograph and ask you to state if that is a correct photographic reproduction of the same thing in different form?

A. Different system of erection.

MR. SHANK: I offer this in evidence.

THE COURT: Any objection to these offers?

MR. COOK: No objection.

THE COURT: They may be admitted in evidence and marked Defendant's Exhibits "O" and "P" respectively.

Q. Mr. Paley, as I understand, you made your sketches first from your own conception of what would be needed out there?

A. Yes sir.

Q. And then afterwards you went down to the City Engineer's office and looked at the maps there and made sketches from them?

A. No sir, I asked Mr. Worley could he get me a cross section of the—

Q. And he gave you a blueprint cross section.

A. Yes sir.

Q. And this was all at the very beginning of the Bassett work out there?

A. The beginning of the Bassett work.

The witness then testified on CROSS EXAMINATION that he had not witnessed forms in place prior to his conversation with Mr. Worley or Mr. Bassett, and the reason why Mr. Bassett failed to accept his form was due to a dispute over the price.

The witness testified on RE-DIRECT examination in substance to the same effect.

Whereupon GEORGE B. WORLEY, resumed the stand and testified that the Grant Smith Company never put in over two or three sections in a week. That they had trouble from the first section put in until the last one, and that all the trouble was caused by insufficient bracing, and that the first two or three sections that Mr. Erickson used they tried to brace it the same as Mr. Bassett had with 2 by 4, and that he informed Mr. Erickson that he would have to make a different arrangement altogether, or they could not go on with the work, that he had had enough trouble on Mr. Bassett's work.

The witness then proceeded to relate the way in which the Bassett form was set up and operated and the way the defendant's form was set up and operated.

Whereupon the witness testified on CROSS EXAMINATION, that the Erickson Company used half of the form sometimes and at other times the whole form was set up before concrete was poured.

Here the witness testified that the form of bracing used by Bassett could not be used practically, and that while working upon the Erickson job they developed the form of bracing used by Erickson. The witness then entered into a detailed description of the way in which the form of construction, the method of setting up the form, the mechanical operation thereof, all differed in vital

and essential particulars from the form used by the plaintiff. He also stated that the interlocking devices on the longitudinal ribs as shown by plaintiff's patent would be impracticable and could not be used. He also stated that the style of form and bracing used by Erickson was so mechanically put together that it would stand alone if all the bracing was taken out, and Bassett's would not do this but would collapse. Also that Bassett's form would not sustain very much of a pressure from the concrete.

Q. You just stated to this jury that you frequently for the purpose of convenience only used half of this templet; now how are you going to nail that brace to this templet when you state that you only used half of it?

A. Nail this to that?

Q. What is going to keep this half ring here from going into the air when you put the concrete on here, the pressure is so intense, only using half of this templet?

A. That is what I was just trying to explain; we put a temporary post from there up to this 8 by 8 that we have across the ditch.

Q. Then you have to put a lot of planks across the ditch in place of setting this all up at once and then have to take them out of the way and put in the other half section?

A. No, we don't either; on the work that I am doing we set it all up at once and I said we generally did set it all up at once, but if we wanted to put in just the bottom part there, why, we would

have to brace it, put in a temporary post and brace it, that post would only have to stay in there maybe an hour or so, just while this concrete was in a liquid form, it only comes up there, so you can see there can't be much pressure on it, it would have to be in there to be sure that there would not be any spring or anything there while the concrete was in a liquid form and that might be for an hour or so.

Q. Then you use this form practically all the time, the entire ring?

A. The entire ring, yes.

Q. Then you do not use the half circle very much?

A. Sir?

Q. You do not use the half ring very much?

A. Which half ring?

Q. Half of this templet?

A. We use a half ring all the time; we never set up a full ring; we put up the half first and then put on the other one.

Q. But when you pour the concrete this ring in its entirety is up?

A. In its entirety is up, generally, yes, but we put it up in two pieces, both together.

Q. Now, Mr. Worley, I want you to state to the jury your business for the past year and in what capacity?

A. For the past year?

Q. Yes.

A. Superintendent of the Interbay section of the North Trunk Sewer for the Colson Construction Company.

Q. Now, isn't it a fact that you are a party defendant in a case of Bassett against the Colson Construction Company for the infringement of this very patent?

A. Yes sir.

Q. You are a party, defendant, yes.

A. Yes sir.

MR. COOK: That is all.

Whereupon counsel on RE-DIRECT EXAMINATION produced model and had it marked for identification Exhibit "Q".

Q. Mr. Worley, will you step down here. I direct your attention to model marked "Q" for identification and ask you to state if that represents correctly the forms and the bracings that were actually used by Mr. Bassett?

A. Well, practically the same; just as I said before, I don't think there was any two sections that were put in that were braced exactly the same, but I don't see how it could be made to represent what we did do any closer than that is.

The witness then testified that the templet was used in two halves; that he had to keep inspectors inside all the time to see that they did brace it, and that if a joint was overlooked through carelessness they had trouble; that they kept shifting from one form of bracing as exhibited in one end of Q to the other.

Here the witness testified that plaintiff had no particular plan or scheme as to how he used the bracings in his work.

Q. With this form of construction was there any convenient way of taking the segments through so that you could continue the operation with any speed?

A. I think anybody can see—

Q. Answer the question. We want it in the record.

A. That was the trouble; just as I said before, the trouble was in getting a true barrel, in getting the sections to hold up the concrete without putting in so many braces that we would be unable to get the other segments through, and that is why—we did get along better on Mr. Bassett's work than we possibly could on Mr. Erickson's work because Mr. Bassett went so much slower, sometimes the concrete had sufficiently set up so we could take all the form out before we put in more segments, we put in only two or three sections generally and then they would have to do some excavating or something would happen and may be it would be a week before we would put in any more, and in that way the concrete was set up, but if we were putting in two sections a day like Mr. Erickson did then we would often be up against it.

Whereupon JERNUM DAHL, a witness for the defendant, being first duly sworn testified that he held a position with the city engineering department

of the city of Seattle in 1908, 9 and 10 as inspector of streets and sewers, and that he had been an inspector upon the work of the Grant Smith job; and that he had also been an inspector upon the work of the Erickson job; and that he stayed upon the work as inspector of the Grant Smith job all day; and that when he came upon the work they had the forms there; that they had one section of the 7 foot sewer set up; and they had one of the 11½ set up and poured; and that they used as bracing 2 by 4.

MR. COOK: We object, Your Honor, as immaterial.

Q. Did they have any system of bracing?

A. Absolutely none.

MR. COOK: Exception.

Q. I wish you would come down here to these models and state to the jury as nearly as you can something about the way in which their bracing was upon that work when you first went out there.

The witness then testified that the bracing was similar to that in Exhibit "Q" in one end only; that they had difficulty with the first brading; that he had compelled them to use better bracing and it helped eliminate the trouble.

The witness further testified, that they can only put in three sections in a week approximately with the Bassett forms.

Q. How many forms or sections would they put in on the Erickson job in a day?

Exception made and noted for plaintiff.

THE COURT: I don't understand the testimony is offered for the purpose of showing that the defendant's device is a little better than the plaintiff's device, but it is for the purpose of showing an utter dissimilarity.

A. I think the most poured on the Erickson work while I was inspector was three sections and a half in a day.

Q. As a city inspector examining the work did you find that the product of that form "K" was always in conformity with the plans and specifications?

MR. SHEPARD: We object to that, Your Honor, as immaterial, irrelevant and incompetent evidence with reference to the merits of the invention and of the alleged infringing of it.

THE COURT: It is offered for the same purpose?

MR. SHANK: The same purpose, Your Honor.
A. It was.

MR. COOK: Exception.

Q. Mr. Dahl, did the plaintiff at other times during the course of his construction work have difficulty in sustaining the course of his construction work, have difficulty in sustaining with this forms the sections so as to conform to the plans of the city?

MR. SHEPARD: We object to that for the same reason.

THE COURT: I presume that is for the same purpose?

MR. SHANK: The same purpose.

MR. COOK: Exception.

A. They did have.

Q. Was that trouble a continuous trouble throughout their operation?

A. To a great extent.

Q. Now, Mr. Dahl, if you will step around here and examine Defendant's Exhibit "J", I will ask you to state whether at any time in any of the works of Mr. Bassett he ever used that form as there shown?

A. Never to my knowledge.

Q. Well, you were upon his job all the time from the beginning until the close, were you not?

A. I was there and I often made trips over the job where I was not inspector and I saw it all.

Q. But you were the inspector upon the job until its completion?

A. On part of it.

Q. And you were over the other jobs on which you were not inspector?

A. Sometimes.

Q. And did you observe the forms they were using on all of the works?

A. I did.

Q. Did you at any time upon any of these works observe forms like that shown here as Defendant's exhibit "J"?

A. No.

Q. Mr. Dahl, was there ever used upon the work of Grant Smith the interlocking device shown by

Defendant's Exhibit "J", where the longitudinal ribs of the segments project so as to interlock one with the other?

MR. SHEPARD: We object to that as immaterial. It has no bearing on the patent whether it was used in any particular case. He might have used it or not used it.

THE COURT: That is an element in the patent, isn't it?

MR. SHANK: Yes, Your Honor.

MR. SHEPARD: It is not a question of whether we used it. It is a question of whether the defendant used it.

MR. SHANK: I will show it could not be used.

THE COURT: Objection overruled.

Q. You may answer.

A. They never used any segments with the ribs sticking out like that interlocking.

The witness then testified upon CROSS EXAMINATION there was a form in place when he first went upon the work, and that that form included a templet, segments, an invert and wedges on both sides of the invert; that the only difference was in the templet which was divided in two halves.

Witness excused.

Whereupon C. J. ERICKSON was called as a witness on behalf of the defendant, having been previously sworn, testified as follows on DIRECT EXAMINATION:

Q. Mr. Erickson, after you secured the contract from the City of Seattle for the building of the Lake Washington branch of the North Trunk Sewer, what did you do with reference to perfecting a bracing system so that you could proceed with your work properly and expeditiously; state to the jury just how you developed this system of bracing shown by Exhibit "K"?

MR. SHEPARD: If the Court please, I don't want to waste the time of the Court to make repeated objections. I simply object now to any evidence bearing upon the subject of the braces for the reason that the bracing is not claimed in any of the three claims that we allege are infringed, and that the evidence on that subject is immaterial, we think, and irrelevant. Of course there should be bracing and the specifications of the patent show that, but no particular system of bracing is an essential of the practical operation and the use of the patent. I simply make this objection at this time and if the Court rules against me we won't waste any more time with repeated objections.

MR. SHANK: Once for all I would like to say to counsel and everybody that the bracing is only one element of this thing and at any rate they have alleged the bracing as one of the very things upon which they stand, and it will be seen by the fifth claim or sixth claim, I have forgotten which, that this cross sill 6 is one of the things that they made the claim upon.

THE COURT: Well, it is well settled that a patentee will not be permitted to deny the materiality of any claim in a patent, and you can't prove your case by piece-meal, and this question has been up a half dozen different times and the same ruling will be made at this time.

MR. COOK :Exception.

Q. You may proceed, Mr. Erickson, and state.

A. When I secured the contract for the Lake Union section of the North Trunk sewer we started our excavation in the fall; we were not permitted to start immediately after the contract was signed on account of the fair; we was held up a few months and we started at the north end, which means First Avenue Northwest I think they call it, and proceeded with the excavation and I think it was the latter part of January we were ready to pour concrete.

Q. Now, proceed and state the way in which you arrived at this system, this form that you finally used there and which you have continued to use on your work.

A. I was not on the work all the time, I had other work, but I came there the first time they had made a section, I looked at it and I inquired how long it took them to make it and they told me, the foreman, and I said then that, "We ain't going to proceed any more with that, we have to do better work than that," and we didn't do much until we had the form of bracing and the whole model there as you see it, practically as it now is in use; from that

time we didn't have much trouble of getting up the section and it was satisfactory, we never lost a section in pouring the concrete; and I would like to explain that to the jury, how we built that up.

The witness then proceeded to testify how he set up his form.

A. 20 foot; after we had set the two templets we had a line so we could take out the invert, that is the bottom of the ditch according to the line that we had, a perfect circle in the bottom according to the plans; so you can see that there was no better system as far as I know at that time to use than the way we had it made here; as far as the making of the templets, the bracing and these segments, why, the carpenter made that as soon as he had orders to make it.

Q. And he made them from the City blueprints?

A. We had the City blueprints and the measurement and we made it from that.

Q. Now, Mr. Erickson, in the making of these forms you always used the templet in two halves?

A. Yes sir.

Q. You always used these bracings in two halves?

A. Always used the bracing in two halves because it served as a scaffold to work on.

Q. And also gave you the opportunity of removing the segments from the rear sections out of the first?

A. Yes sir, room enough for a man or two or three men, whatever it took, to carry one of those

segments right through there to the next section we built out.

The witness then testified he never used the plaintiff's form, and had never seen it or his patent until he was present in the court room.

Whereupon the witness then testified on CROSS EXAMINATION as follows:

Q. Have you ever read Mr. Bassett's patent?

A. No sir.

Q. When he sent you that notice did you take enough interest in it to read it?

A. I referred it to my counsel when he sent the notice and that is all I done to it.

Q. Well, you have a fair knowledge of drawings, have you not, Mr. Erickson?

A. Oh, yes, I think I understand them fairly well.

Q. Well, don't you ever look into any of the matters?

A. Sure I do.

Q. You could understand that drawing in Mr. Bassett's patent, could you not?

A. It didn't appeal to me that it was worth anything.

Q. You simply ignored it?

A. I didn't ignore it.

Q. Mr. Erickson, when did you take the contract from the city on the Lake Washington sewer?

A. It was in July, 1910.

Q. And when did you finish it?

A. I finished it last year in July.

Q. 1912?

A. 1912.

Q. You finished it in 1912?

A. Yes sir.

Q. Was it accepted at that time?

A. Yes, I believe it was.

Q. How long was it?

A. Oh, it was about seven miles near I think; I can't say exactly; there was different sewers and sizes.

Q. You used these forms all through it?

A. I used that kind of forms that you see there there in it.

MR. SHANK: Exhibit "K".

THE WITNESS: Exhibit "K" in all the concrete sewer we built.

Q. Just step down just a moment. You used segments?

A. Yes sir.

Q. You used this templet?

A. Yes sir.

Q. Divided?

A. Yes sir.

Q. You used a sill down here?

A. Yes sir.

Q. You used wedges?

A. We used them where we had to straighten it up for to get a uniform size of it; very little of it.

Q. Well, you used wedges on both sides; tightened it up with wedges?

A. Yes sir.

Q. You used the invert also, this part down here, the invert?

A. Of course we used the invert.

MR. COOK: That is all, Mr. Erickson.

RE-DIRECT EXAMINATION.

BY MR. SHANK:

Q. Mr. Erickson, did you use the sill or did you use that solid piece down there in the invert?

A. I used it the way—

Q. It is shown there?

A. It is shown there; of course in bigger proportions.

MR. COOK: Just a solid sill?

THE WITNESS: Well, it was made in pieces.

MR. COOK: It was made in pieces?

THE WITNESS: Like that is.

The Court then admitted the identified exhibits and had them marked defendant's exhibit "R".

Witness excused.

Whereupon CHARLES D. HASKINS, was produced as a witness on behalf of the defendant, having first been duly sworn testified on direct examination, that he resided in the city of Seattle, that he was patent attorney by profession, that he had been a patent attorney in prosecuting applications before the office, and as an expert in patent matters, covering a period of something over thirty-

five years; that he had had practical experience as a mechanic and mechanical engineer and had gained wide knowledge in matters pertaining to patents and patented devices, having served as apprentice machinist and as a foreman and as a superintendent of the old Western Union factory in New York City, and subsequently as superintendent of the Western Electric Company's factory, and during his service as foreman in the factory of the Western Union Telegraph Company, when he was quite a young man, he assisted attorneys in drawing specifications for applications for patents on electrical and mechanical devices.

The witness further testified that he had acted as superintendent of the Western Electric Company in New York, and had passed upon the scope and merits of all the patents that were offered to the Western Electric Company during the time he was superintendent of the factory; that he had given testimony in chief as patent expert, and that in all those cases that were prosecuted on defendant, the Western Electric Company won or at least those that he consented to give expert testimony in.

The witness further testified that he had made a careful study and analysis of the patent in question with its relation to the prior art and with relation to the file wrapper and contents, that was a matter of record in the patent office. That he had also made a careful study of the patent as it relates to the exhibits on file in this case, that are supposed to be infringing exhibits; that he had

familiarized himself as to the condition of the prior art on matters contained in exhibit "1" as of the date when the application was filed, and that long prior to the date of the alleged invention of the patent in suit, he had seen sewers and had been within sewers, that must have been made by the use of forms for supporting the arches and sides.

The witness further testified that he had found that every element named in any of the claims of the patent in suit, 1, 5 and 6 had been employed in prior forms at different times; that every element was old; that he did not find a single element in plaintiff's patent that was new; nor did the combinations named in either one of the claims 1, 5 and 6 contain a combination of elements which served to achieve any new result.

The witness then proceeded to point out the elements in the patents cited by the examiner during the prosecution for the original application for a patent.

A. In the Barnett patent, which is—

MR. SHEPARD: (Interrupting) I think the Court did not understand my objection—

THE COURT: (Interrupting) There has been no objection.

MR. SHEPARD: I object on the ground that he did not use certified copies.

THE COURT: The paper to which he is testifying now is exhibit "A", which has been admitted in this case—is that right?

MR. SHANK: Yes, Your Honor.

THE COURT: Yes, that was admitted by this court.

MR. SHEPARD: That was admitted under our objection.

THE COURT: That was admitted not for the purpose of establishing an anticipation, but it was admitted as a part of the cross-examination of the plaintiff's patent attorney, Reynolds, for the purpose of showing that at the time of making the various improvements in the application this patent and those included in exhibits "A" to "F", inclusive, were in the possession of the plaintiff's attorney; the court taking the view that the knowledge of the plaintiff's attorney would be the knowledge of the plaintiff only for the purpose of showing, in so far as they purport to show, the prior state of the art, not for the purpose of establishing an anticipation.

The witness then testified that the Barnett patent related just as much to a circular complete without an invert as it does to an invert.

Q. Assuming that situation, then, is there any element in the plaintiff's patent that is not present in Barnett's?

A. There is not.

Q. I refer you next to the Morris, exhibit "B". State what elements you find present in that patent?

The witness then testified that he found the longitudinal segments which such segments being held by a brace, that he found a restraining band or templet at each end, and means for forcing each

of the segments outwardly against the restraining band including the segments, whose edges are dove tailed in the opposite direction to press the other segments by peripheral motion, a part, and to wedge in as a key-way; and that every element present in that patent was present in the plaintiff's.

Q. I now refer you to Naas, defendant's exhibit "E," and ask you to state what that form is for?

The witness testified that the principal feature was the interlocking, that is a restraining band for holding the staves for the pipe together; it is a stave pipe and the sections are joined, interlocking as described in the 5th claim of the patent in suit.

Q. In other words, the interlocking device is this device where the longitudinal ribs of the segments interlock with each other?

The witness testified they were just as described as the patent in suit, that he found the longitudinal sections, the restraining band, the interlocking device as described in the fifth claim.

The witness then testified as to Dooley defendant's Exhibit "D", and stated that he only found methods for pressing or enlarging the diameter of the forms and giving the form peripheral motion by reason of its enlargement in diameter.

The witness then took up McNamara No. 521767 that was offered by the defendant and admitted in evidence and marked Exhibit "S" and related that he found every element present with the exception of the restraining band.

The witness then took up Gustafson No. 782,446 offered by the defendant's counsel, admitted in evidence and marked Exhibit "T". The witness related that that patent disclosed the principle of longitudinal segments that are adapted to give peripheral motion to enlarge their diameter to a desired form, and while there was not shown on the drawing any restraining band or hoop for such segments, he presumed that one should assume that there was no necessity for showing it.

The witness then related as to Gustafson 783,575, admitted and marked defendant's Exhibit "U", and related that he found present in the two Gustafsons, the longitudinal segments adapted to be expanded peripherally to enlarge their diameter and move peripherally, and to keep them against the material that is being deposited thereon; such segments adapted to be collapsed and be removed to form a new section, and the patent disclosed a plan by which they could be removed from a complete section of sewer to the next section and be used again to form the succeeding section. The witness further related to the contents disclosed in a bundle of patents which counsel handed him, and which he stated he had examined previously, the first of which was F. S. Graef No. 983046, admitted and marked defendant's Exhibit "V".

The witness stated that he found the longitudinal segments that were adapted to form tubes, and one of which segments was adapted to act as an invert key; and the segments were adapted to be moved

peripherally to enlarge the diameter of the barrel; that the restraining band or templet was not disclosed, but that the plan by which the segments were moved peripherally was present. The witness then related as to Graef No. 963,544, admitted and marked defendant's Exhibit "W".

A. I find segmental sections or staves that may form—that serve to form the lining or part of the form—it is a tubular form—and they are evidently made—bolted together, with an iron tube that is parted at one point where it can be expanded to increase its diameter. Strictly speaking, this would be—you would not call this or that other Gustafson patent made up of moveable—each segment is independently moved; they are fastened to a tubular plate, a plate of tubular form, and it is the plate that is enlarged in diameter by separating it—the parts that are dished to each other at the bottom of the tube, and that form is enlarged by peripheral expansion, and a key—a removeable key placed there; you might consider that that removeable key would be one section and the whole of the band another section—or one segment and the whole of the band another segment.

The witness then pointed out the elements in Reno, No. 816040, offered by the defendant, admitted and marked Exhibit "K". He stated he found present a circular form that served to support the arch portion of the form upon a sill, a transverse sill like that known as sill 6 in exhibit

“J”. That there was a system of bracing that was adapted to be raised up.

A. That is adapted to be raised up right in between there and there; that is, it is raised from this bar on this sill by jackscrews that—just as though you would put a jack-screw here and another jack-screw here, turn that screw to raise this and this, this being a bar clear across up against this form here. Very much—this would suggest that construction in so far as raising up this if this was all one piece. This sill present here and this is in the place of—that is used in the place of this.

The witness was then handed a copy of Ransome No. 545978 admitted and marked defendant's Exhibit “Y”.

A. I recognize this as a form that has been used or mentioned in engineering papers as having been used to a certain extent. It comprises an iron form that is bent in a form of a cylinder up to—with its edges separated at the top, and between those—that top opening is disposed key-way that can be raised up to—that can be raised up to press out any material that may have fallen between the slot, so that while the material is wet there they can raise that key-way and push the concrete that is there solid up against the top of the boring of the tunnel, in order to make a solid lining, and it has means for making—expanding radially and moving peripherally. The pressure of this key, which is of wedge-shape, upward, moves the form

peripherally, or parts of the form, brings it outwardly and separating it peripherally.

Q. Mr. Haskins, in these different patents, copies of which are here produced and examined by you, do you find any element present in plaintiff's device that is not present in some one or more of these patents?

A. I do not.

The witness then related that where the exact elements were not present, he found the mechanical equivalents thereof.

The witness was then handed Reid on Concrete, defendant's Exhibit "N," and had his attention called particularly to page 661, and was asked to state whether he found in that Exhibit the elements or any of them contained in the plaintiff's device, and he stated that he found all with the exception of the interlocking means of the several segments. "There was evidently a telescopic connection between the various segments, and that it was adapted to build monolithic sections."

The witness was then called upon to produce a copy of the Paley application for a patent; the party who previously had testified as a witness for the defense.

A. This Paley application was filed August 13, 1908, and was prosecuted diligently until October 22, 1912, when the one claim that was finally—originally the application contained five claims, but subsequently it dwindled—they dwindled down, one after another, and October 22, 1912, more than four

years after the application, it was finally rejected, and the Patent Office referred to nine different patents as of prior date, and the Paley device contained a form wherein there was an offset for the brick lining for the invert—an offset.

Q. Mr. Haskins, I refer you to these papers and ask you to state if that is the file wrapper and contents which you received from the Patent Office, bearing upon the Paley patent?

A. No, this drawing I received from a man that I telegraphed to.

The witness testified that he recognized it as a photolithographic copy of the Patent Office as originally filed by the—

MR. SHANK: (Interrupting) I offer this in evidence.

THE COURT: That is just the drawing you are offering?

MR. SHANK: That is the drawing.

Q. (Mr. Shank) Have you a copy of the specifications?

A. I have.

Q. Well, then, let me have that.

A. But I wish to say that this came from—this is not the Patent Office record, but the original rejections of—communications from the Patent Office wherein they reject and file rejections to the various claims made.

Q. In other words, these papers that you hold here you recognize as the originals from the Patent Office, addressed to the applicant?

A. To the attorney.

Q. To the attorney for Mr. Paley?

A. Yes.

The offer was held in abeyance until counsel for plaintiff was permitted to examine the application, whereupon counsel for the defense proceeded to examine witness upon other matters.

Q. I want to ask you whether in that device you find any element present that has not been specifically embodied in other devices or their mechanical equivalents?

A. There is nothing present in the structure. The witness then had his attention called to claim "1" and related that the wedges 13 had no effect on moving peripherally the segments above the invert. That it simply had the effect of compressing the segments above that point closer together.

Q. As compared with defendant's exhibit "K", which you have examined, this form over here, I will ask you to state if in that particular there is any difference in driving—does the tightening of the segments in "K" at any point have any direct tightening effect upon the segments of the invert?

A. These wedges here between the invert segment and the arch segments tend to press together every segment forming the complete circuit. And such wedges, when driven in properly, would so spread or compress the segments together and expand them against the restraining hoop or templet so that no bracing need be inside, for it would be just like a barrel.

The witness then related that the interlocking feature referred to in claim 5 should be read to understand it in the light of specification; that to understand what is included in claim 5 it was important to read the specification, and that claim 5 must be read in the light of the file wrapper and contents.

A. Originally as filed, the specification read in this way: "These segments are so arranged that those which are above the center line of the conduit have the ends with the lagging projecting farthest, next to the conduit section which has been completed, so that this projecting ends of the lagging projecting farthest, next to the conduit section which has been completed, so that this projecting ends of the lagging overlap upon the transverse ribs of the segments in the completed section, while those which are below the center line of the conduit have the transverse ribs projecting at the same end. Stated in another way, that part (rib or lagging) is made to project at the end next the completed section, which is above or uppermost, so that it may be supported upon the complementary part of the segments used to mold the completed section."

Now, after—they wrote claim 9 that—the original Claim 9, and it specified that. After they were rejected on Claim 9, they amended this application by bringing out the interlocking feature, in order to give them basis for the present Claim 5. The

original claim 9 was merely for a telescopic connection like in sewer pipe.

Q. In other words, the specifications simply gave an overlapping telescopic connection?

A. Yes.

Then subsequent to the rejection of this Claim 9, when they could not get that through they just wiped out that matter there and substituted for it these words: "These segments are so placed that when set up, the ends of the segments forming the new section will overlap those of the section just completed, in such a way as to resist displacement while setting up and while placing the material of the wall, at least until the interior bracing has been placed. In some cases the outer skin of the segments of the new section will be outside the transverse ribs"—like that—"of the segments of the preceding section, and in some cases this condition will be reversed." That is this—when they are set up, this will be out this way, and the next section and end like that will be out this way. (Illustrating) They will be reversed. Also, to interlock: "Also, the ends of the longitudinal ribs project half the thickness of the transverse ribs at one end and terminate at the center line of the transverse ribs at the other end, whereby—"that is this feature here" (indicating)—"whereby the ends of the segments of adjoining sections interlock to secure exact registry and to prevent peripheral displacement." Now, you would not secure exact registry at all by just merely having this overlap, be-

cause this joint here might be like that, they would not register at all, these segments would not register each other, and they are talking about segments, not sections, there.

Q. You mean, when you say “segments,” these separate parts, as contrasted with the whole section of the tube?

A. The whole thing is a section, and this is a segment. (Indicating.)

“The segments of the completed section of conduit thus support and exactly locate”—now, the telescopic connection does not locate it, it is only the interlocking—it is that locates it, and the drawing, figure 2, shows distinctly, and that is what they are describing here. “An inspection of Fig. 2 will show that the outer skin or lagging of the segments projects beyond the transverse ribs 21, 22 and 24, at one end of the segments, and that the transverse ribs project beyond the outer skin or lagging at the other end of the segments. These segments are so placed”—and so forth. They are talking about Fig. 2, shows that cut. To make a locking device, they added that description in there claim 9 of the original application, or the original claim 9 was rejected in order to lay a basis for claim 5, they added that amendment showing that interlocking construction there.

The witness then testified a telescopic joint was not interlocking with respect to segments, and it was segments that they were talking about, and not the interlocking of sections, but the interlocking

of segments. That the interlocking device could not be used practically, and that peripheral motion could not be obtained at the other end by the driving of the wedges 13. That a spiral opening between segments would ensue. The witness then read claim 5 and stated that the interlocking referred to was a transverse rib at one end projecting beyond the end of the lagging and other end the lagging extended beyond the rib.

A. The language says “segments.” If it referred to the telescopic joint, which is not interlocking in any sense here, they would have said “interlocking between sections.”

The witness further testified as follows:

A. And this—as I have explained before, Your Honor, this interlocking engagement is specifically described and was described subsequent to Claim—a broader claim known as Claim 9 when it was rejected, and this amendment was put in as a basis for this claim 5 that—explaining this interlocking as described in figure 2—as illustrated in Figure 2 and as specifically described by this second amendment of the specification—of the descriptive portion of the specification—not an amendment of the claim, but the descriptive portion of the specification. Therefore, this claim here would include or describes as ordinary stave pipe with hoops around it, and it would be included.

The witness then testified that assuming the mechanical structure of the plaintiff's device to be in accordance with the plans and specifications, that

it could not be used for the purpose for which it was designed; that the structure was wholly inadequate for the service that it was called upon to perform; that the combinations of elements in the defendant's device were not disclosed at all by the device of the patent in suit, since there were no segments in the invert wholly without and further from the center than the segments of the device of the patent in suit, and that the defendant's device did not operate by the same mode of operation.

The witness then pointed out that segments 3 would collapse under concentrated pressure; that there was nothing shown in plaintiff's device that required any more than ordinary skill of a mechanic to produce.

The witnesses's attention was then called to the papers of the Paley application for a patent referred to previously in his testimony.

MR. SHANK: I offer these in evidence, Your Honor.

MR. SHEPARD: We have no objection on any technical ground that they are not certified copies from the record or anything of that kind, but that they are wholly immaterial and do not have any real regard—

THE COURT: I do not know what they are, myself; I do not know whether they are material or not.

MR. SHANK: This is the application of Mr. John Paley, a witness upon the stand here, with reference to the device that he sought to have pat-

ented, the letters from the Patent Office as to the various patents upon the prior art covering substantially the same matters as here contained, particularly, if the court please. In the patent of Mr. John Paley, he sought to obtain substantially the form of invert segments that is used by the defendant, in our exhibit "K". The Patent Office, replying, recognized that, and refused to issue a patent upon that form of device.

THE COURT: Didn't it subsequently issue this patent to the plaintiff?

MR. SHANK: Yes, it was.

THE COURT: What is the object of the offer?

MR. SHANK: Final rejection—you are familiar with these papers. (Addressing witness.)

THE WITNESS: Yes, the final rejection was October 22nd, last October 22nd, a long time after the—a long time after the patent in suit.

THE COURT: The state of art is to be taken into consideration at the time of the granting of the other patent.

The counsel withdrew objection and the rejected application was admitted in evidence and marked defendant's Exhibit "Z".

Whereupon the witness testified on cross-examination that he had been admitted to practice before the Patent Office, since 1910, and that his thirty-five years practice before the Patent Office referred to in his direct-examination was done in the name of some one else.

Q. Is a combination claim of a patent infringed except by the use of all of the elements contained in the claim?

A. A combination patent is infringed only when each and all of the elements named are used or embodied in the structure.

Q. Can you pick up one of the references cited by the examiner when the original application was prosecuted before the Patent Office and point out where all of the elements involved in Claims 1, 5 and 6 were embodied in any one of those references cited by the Patent Office? If you can, I would like to see you.

A. I don't think that such is the case. I don't think that everyone—it seems as if there was but—I don't think that there is any one of them that has all.

Q. Now, you know, as a patent attorney, that a combination patent, it makes no difference whether the elements taken in that are old, and yet you spent a great deal of time before this jury in picking out elements that were old in new patents?

A. Every element in a combination claim is old in law, whether it is actually new or not. It is the combination that is new.

Q. That is what I am trying to get. I want you to pick up one of those patents cited by the examiner, either where they were cited by the examiner or whether you got them from a search in the Patent Office, and state to the jury whether ele-

ments in any one of those patents are involved in claims 1, 5 and 6 of Mr. Bassett's patent?

A. My impression is that some of them—some one or more of them have mechanical equivalents or equivalent.

Q. Have any of those patents cited by the examiner—an invert with a recess, in connection with the other elements cited by the claims 1, 5 and 6.

A. I don't—I guess you are right. I don't think that any one of them have got all the elements named.

Q. As a matter of fact, don't you know they haven't got it.

A. No, I don't, without I should take and go right over them again.

Q. You stated before this jury that you had examined them, you had examined them as an expert, and you testified to the fact that these elements involved in these patents are found in those patents cited by the examiner, when, as a matter of fact, one or two elements may be cited in each individual case, but the combination of elements in any one patent may be found by giving all the references obtained in such by the examiner; isn't it a fact?

A. As I have said, I do not think that all the elements in any particular one of those patents are present, but there are equivalent elements or equivalent devices in some of them that disclose the function.

Q. Now, you stated before this jury that in your model over here, the defendant's device, that you

could take out that bracing, if it was properly made, and it would stand as an arch, did you not?

A. I said so.

Q. Then you do not claim that the bracing used has made that device more practical or an improvement, do you?

A. I don't. I have made no comment on that at all. I say that the bracing that you—that is used in the defendant's device, is absolutely by a different function—performs a different function and has not the same mode of operation then.

Q. Now, take up Mr. Bassett's original application and patent and point out to the jury where it specifies and states and limits any number of segments to be used in the patent, also state whether it limits the number of segments to be used in the invert?

A. It don't, you could not be limited to any number of segments.

Q. Is there anything in the specification or in the claim that limits the width of this transverse sill? Read it.

A. No sir.

Q. Well then, how is it going to press it out? We can make this sill any depth or width we wish to. You say we are limited by our specification. Read where the specification limits the width of this transverse sill.

A. You can put that clear up to here, if you want to. (Indicating.)

Q. Have you made any measurements of this arch—

A. (Interrupting) Of course not.

Q. Then don't you know this is a perfect arch and it would not collapse, that the only way you could possibly do so would be to crush that wedge?

A. I know it would do exactly what I have said. I know it would do exactly what I state. It is very easy to have that wood compressed enough to allow that little bit of angle there to be compressed in so that this would come right up there; even if this segment here was completely solid clear up to the center, that would open right in there, and the purpose of this sill is to serve as an abutment, as the patent calls for right here.

Q. Now, take up the Paley application, Mr. Has-kins, and point out to the jury, where it has any reference whatever to the offset in the invert, either by inference in the specification in the claims, or by reference characters?

A. He does not claim the offset. I don't know that there is, and neither have I said there is. I say that the drawing illustrates such a device.

Q. I ask you to examine and state to the jury whether there is any reference to it in the specifications?

THE COURT: (Interrupting) I wish to suggest to counsel that the question calls for a pretty comprehensive investigation. That particular feature of it; if you could specifically direct his attention

to it you could shorten the examination by doing that.

Here the witness testified that the form of bracing was an essential element in the patent.

MR. COOK: They placed Mr. Paley on the stand as the leading witness. He testified to the fact that he gave all these ideas to Mr. Bassett. He was the first witness that was introduced— We want to prove that his original application before the Patent Office did not embody the elements in the claims that were passed upon by the Patent Office and are embodied in Claims 1, 5 and 6, nor didn't allude to them, either by inference in the specifications or in the claims.

Q. Is there any inference to the bracing in the claim?

A. Means for pressing the segments outwardly toward the restraining band.

Q. Show it, point it out, point it out in the claim, where it says anything about means for pressings these segments out?

A. “—and means for expanding the segments peripherally—”, “—and means for peripherally expanding those segments above—” (examining)

Q. Claims 1, 5 and 6.

A. “—and means for keying the segments outwardly from said sills against the restraining member.”

Q. Read the rest of it.

A. I did, that is the rest of it.

Q. Where is it?

A. “—means for keying the segments outwardly from said sills against the restraining member.”

Q. Now point that out, what it has reference to—the means for keying the segments outwardly?

A. Here. (Indicating) Means for pressing these out, these wedges here.

Q. What has it reference to, it has reference to that wedge, hasn't it?

A. Yes.

Q. Well, it has no reference to the pressing, has it?

A. Well, it didn't name the pressing in terms, no.

Q. It does not intimate anything about the pressing does it, in the claim?

A. Yes, means for expanding the things out against the restraining band.

Q. (Mr. Shank) How about the transverse sill?

A. And the transverse sill.

Q. You stated it was this wedge?

A. This wedge, I say this wedge and any means for—this wedge has a tendency against this—against this sill across here to enlarge the diameter and expand them out against the segments or restraining band, doesn't it?

Q. State to the jury where this wedge has any mechanical connection with the pressing, where is its function?

MR. SHANK: I would like to ask counsel a question, if he claims the bracing has anything to do with the operativeness of his patent.

MR. COOK: We have absolutely stated no from the very beginning of this suit.

MR. SHANK: Well, then we will take out the bracing in the model and see whether it stands.

MR. COOK: That is your model and it is a defective model, which is very apparent to the jury.

Q. (Mr. Cook) Point out where the claim even by inference has any reference to the bracing.

A. Well, if you call—the bracing means for expanding these segments out from the cross sill toward the restraining band, by that means.

Witness was requested to read claim 1, and was asked what he understood to be the “means” for peripherally expanding the segments above the invert.”

A. The means is this system of bracing here, this sill and this wedge here, and this wedge over here, whereby this is enlarged in diameter to press outwardly against the segments.

Q. That claim where it says “Means for peripherally expanding the segments” has no reference to this interior bracing, has it?

A. That would have no action on this interior bracing except to loosen it up and let it fall down.

Q. What would be the action of the interior bracing, would it be peripheral or radial?

A. Radially.

Q. Well, it does not state radially in the claim.

A. I have not claimed that it does. I have not explained the claim as having any bearing on the description of the means that causes these segments

to be expanded radially. That expands them radially.

Q. What expands them radially?

A. That wedge driven in there expands them radially, because it enlarges or has a tendency to enlarge the circumference of that.

Q. And not peripherally?

A. Also move—they move also peripherally, but they also grow larger in diameter radially, they expand both radially and peripherally.

Q. All right, you have stated that it is not claimed to have any reference to this bracing, claim 1, this bracing—

A. No, it has reference—

Q. (Interrupting) That is all, that is enough.

MR. SHANK: That is not enough—

A. (Interrupting) It has reference to a means for expanding it against the restraining band.

Q. (Mr. Cook) Peripherally?

A. Peripherally, and also it expands it by enlarging its diameter radially—both.

The witness then testified upon re-direct examination, that in the plaintiff's exhibit 1, that if the bracing was removed the form would collapse.

RE-CROSS EXAMINATION.

Q. Is the bracing as embodied in this model "Q" at all illustrated in the drawings of Mr. Bassett's patent, or is it intimated in the specification or pointed out in the claim.

A. This device here is not described in the patent in suit, witness referring to defendant's Exhibit "Q".

MR. SHANK: The defendant rests.

Whereupon H. L. REYNOLDS, being recalled, as a witness in behalf of plaintiff, in rebuttal, testified as follows:

Q. (Mr. Cook) Take the Paley application and point out what if any similarity is there between the construction described and claimed in the Paley application and that claimed in Bassett's claims 1, 5 and 6? (Handing witness defendant's exhibit "2").

A. Mr. Bassett's patent covers a particular kind of form, composed of segments combined with a restraining band, the restraining band having an off-set at the point where the invert segments are placed, and other matters of that sort, which form a mold for the inner surface of a concrete tube or sewer; while the Paley device, as described and claimed, covers a very specific type of apparatus used for supporting and holding in place reinforcing bars which are to be placed in the body of the concrete forming the sewer. There is about as much similarity between the two as there is between black and white. In the Paley application, at no point is there any reference, either directly or indirectly, made to the off-set portion at the part where the invert is to be formed. I had this file of the Paley application during the noon recess and went through it very thoroughly, and at no point in there is there

any reference whatever made to any form of construction which even remotely resembles the features which are defined by the claims of the Bassett patent, and, according to the ordinary rule of interpretation of the scope of patents, the fact that he made no claim whatever to this construction, and did not even describe it, is proof positive that he understood and recognized at the time that it was no part of his invention.

Q. Now, Mr. Reynolds, take up the original patent and point out what is meant by the interlocking engagement in claim 5.

A. The statement was made here, by a witness on the other side, that Claim 5 in the use of the term "interlocking engagement" meant the interlocking engagement which was secured by the projection and recession of these longitudinal ribs of the segments. That interpretation is absolutely without warrant. Claim 5 is one which is very clear and distinct in its terms, and, being so, there is no need of going to the specifications to interpret it. It says, in defining the limits which form this claim: "An inner form for molded conduits, comprising longitudinal segments composed of outer lagging and ribs secured thereto, said ribs including transverse ribs at each end, the transverse rib at one end projecting beyond the ends of the lagging and at the other end the lagging extending beyond the rib, whereby—" that is because of the construction just defined—"—interlocking engagement between segments may be obtained." The main interlocking engagement

which that claim means—can mean nothing whatever except the interlocking engagement which is produced by the lagging extending beyond the ribs at one end and the ribs extending beyond the lagging at the other end, and to try to make that claim read that it is an interlocking engagement which is caused by the side-bars projecting at one end and not projecting at the other end, is a very strained interpretation, to say the least, and I don't believe but what, looking at that in a simple, plain, common sense sort of a manner, any person of average intelligence, even less than any of these witnesses show, could see it. That claim further continues: “—said segments also having longitudinal ribs at their side edges—” which shows very clearly that the longitudinal ribs were not intended or meant in that interlocking engagement, “—at their side edges adapted to engage those of adjacent segments to form an arch, an independent, radially extending rib surrounding the outer ends of the segments and acting as a restraining band and a temporary end wall for the mold section, and means for expanding the segments peripherally against this band.” Now, the only reference to interlocking engagement that is contained in that claim is very clearly defined as the interlocking engagement which tends to support the newly set up segments from those which had previously been set up, and is produced by the projection at one end of the segments—of the lagging of one seg-

ment and the projection of the transverse bar of the segment which is abutted against that at its end.

Q. Mr. Reynolds, state what you understand to be the meaning of that part of claim 5 which says, “and means for expanding the segments peripherally against this band”?

A. The means for expanding the segments peripherally are means which act parallel with the circumference at the point where applied, which can only mean the wedges which are placed at the ends of the cross-sill. Now, the inner bracing, consisting of various posts shown in the model (are small); first, convenient means for supporting the segments while they are being set up in place, and in the second place, a further security against possible rupture of the arch by any weight that may be applied to it.

The witness then testified that the bracing was not an element in any one of the claims 1, 5 and 6, and consequently the omission of those are the substitution of something else for them, whether it was better, worse or the same, would have no effect whatever on the question of infringement.

Q. Why is it that all of the elements are not embodied in one claim, and why is it any patent has a number of claims?

A. If all of the elements—if a single claim were employed and all of the elements were included in that claim, any construction which did not use all of those elements would not infringe, which is the reason why it is desirable that claims should be

contained in a patent containing as few a number of elements as will make an operative combination, for the reason that if those few elements are used and other elements not included in a claim are used, then that claim would be infringed. In other words, it is just the difference between generic and specific. There are generic claims which would be infringed by the use of various kinds of mechanisms of an equivalent character, while extremely specific claims would be infringed only by the use of the exact type of elements named.

Q. What type of claim would you consider 1, 5 and 6, would you consider them specific claims, or not?

A. The only way to answer that would be as compared with other claims and in that way I would say that as compared with other claims in this patent, they partook of the nature of generic claims, while the other claims than 1, 5 and 6 partook more of the nature of specific claims.

CROSS EXAMINATION.

Q. (Mr. Shank) Mr. Reynolds, do you mean to say that the Claims 1, 5 and 6, do not embrace the bracing?

A. Claims 1, 5 and 6 make no reference whatever to that—

Q. (Interrupting) I am not speaking about reference, I am speaking about inclusion; do they include, or not, the bracing?

A. They don't include a bracing of any type whatever.

Q. How can you then expand the segments without a bracing?

A. By the use of the wedges which are placed at the end of that cross-sill.

Q. How can you tighten this and sustain this without the bracing?

A. The segments located above the invert, in combination with that cross-sill and the wedges, form an arch.

Q. What is the matter with this cross-sill? Isn't that a part of the bracing? Isn't that a part of the interior structure—cross-sill 6?

A. The—

Q. (Interrupting) Answer my question.

A. It is not a part of the structure which forms that radial bracing.

Q. I am asking if that is not a part of the interior structural bracing of the segments?

A. No, not in the sense in which the term has been used here right along by counsel and others.

Q. Now, as a matter of fact, when you say that no part of the bracing is a part of Claims 1, 5 or 6, you desire to modify that to the extent of saying that cross-sill 6 and the bracing underneath that is a part of the claims, don't you?

The Court then instructed witness, answer the question yes or no, that he could make an explanation afterwards.

A. Yes, with this understanding of the meaning of the word, that the radial bracing which I referred to in my previous question—or, rather, I want to

cancel from my present answer that use of the word "radial" at that point and say that the bracing referred to in my previous answer included the radial bracing which has been talked about here so much and which had nothing whatever to do with the terms of any one of the Claims 1, 5 and 6. Now, the sill across the top of the invert is of course an abutment for the segments which form the arch, and, in that sense, is a part of the arch, and a part of the arch and not a brace.

Q. (Mr. Shank) Now, you say this is a part of the arch, but not a brace?

A. I do, yes sir.

Q. Now, then, as a matter of fact, when you speak of the arch you are speaking of the segments above the invert?

A. I am, and not of those in the invert.

Q. Not of those in the invert. Then you are subdividing your patent into two propositions—a thing that exists above the invert and that which exists below the invert; is that correct?

A. I certainly make a subdivision of that sort.

Q. And the moving of these segments of the upper part resting upon sill 6, with the braces under sill 6, would have a tendency to raise the segments in the invert—wouldn't they?

A. No sir, I don't think they would.

Q. Now, Mr. Reynolds, as a matter of fact what you mean to say with reference to the interlocking is that your interlocking is an interlocking with the lagging of each segment; is that correct?

A. The statement is not exactly correct. What I mean to say is, it is an interlocking as between the lagging and the transverse bars at the end of the segment.

Q. The models which you have produced here in court do not contain that interlocking device, do they—that you have testified to?

A. Yes sir, they do.

Q. Where?

A. The lagging projects beyond the cross bar at one end, and the cross bar beyond the lagging at the other end.

Q. Are they alternating at the same end, do the segments alternate, male and female ends, at the same end of the section?

A. No, because that is an impossibility.

Q. How did you make the drawing in your patent so that it showed such an interlocking, then—why did you do it.

A. Well, in setting that up, it was explained to me that the segments which were in the lower portion of the form would want to be supported against falling down while they were being put in place. To do this it would be necessary that they rest upon some portion of the segments of the section which had been previously molded. For that reason the lagging at that end should project beyond the cross bar in order to give it the support—

Q. (Interrupting) Now—

A. (Continuing)—while in the upper portion of the form the condition was reversed; and it was

desirable in some cases to reverse the relative position of the segments. There is nothing in the patent to state that they are placed in one position at all times; they may be placed in any position desired, so far as reversibility end for end.

Q. I refer you now to the loose segment attached as a part of exhibit "J," and ask you to state if that is not a correct reproduction of the segment as you have described it in Figure 2 of your patent?

A. It appears to be the same in all essential purposes.

Q. Yes sir. Now, I want you to explain to this jury if you consider that interlocking part a part of your mechanical device?

A. I considered that there were—that the features shown and which are referred to by you, were parts of the invention; not that all of the features shown in here necessarily had to be employed in order to infringe. There are two forms of interlocking in it. Claims 1, 5 and 6 don't specify or include, in any sense whatever, one of those forms of interlocking. They specify the other only.

Q. Do you claim either one of these forms of interlocking as a part of your mechanical device?

A. Not if you consider that alone and by itself, but in the combination specified I do, I consider that the combination is a patentable one.

Q. Do you regard the interlocking device as a part of the mechanical element in this particular claim which plaintiff has made and has shown in his model?

A. I consider the radial interlocking as an element of it, not the whole claim, by any means, but simply one element.

Q. Do you consider this interlocking device, which you have described, as one of the mechanical elements in the device of the plaintiff?

A. As one of them, yes sir.

Q. Now, don't you know, as a matter of fact, as a patent lawyer, that in the absence of a device that is alleged to infringe the patent combination or a single mechanical element of that combination, it is fatal to the claim of infringement, and we don't use that interlocking device at all; isn't that a fact?

A. The statement of law contained there is correct, but the statement of fact with regard to the use of it and the non-use of it is not correct. You do use it.

Q. Where do we use it? Where do we use it?

A. Where is your model? I will show you.

Q. All right.

A. There is a lagging projecting beyond the transverse ribs.

Q. Yes.

A. And in the form of this device as actually used on the work, that lagging projected at one end, while at the other end it was recessed back to about the center of the transverse ribs.

Q. How is the world—

A. (Interrupting) That is the feature which has been talked about as the radial interlocking.

Q. Do you mean to say that is an interlocking of the segments?

A. That is an interlocking of the segment of this section with the segment of the section alongside; that is in no sense whatever an interlocking between two segments of the same section. No one that I know of, unless it might have been the defense, has inferred anything of the sort.

Q. How in the world can you, by that sort of so-called interlocking, find and locate one segment against the other accurately, as you say in your specifications, as one of the particular purposes of this whole interlocking scheme is to locate these segments; how could you locate them there?

A. By putting them in proper position.

Q. Well, the interlocking device don't have anything to do with locating them, does it?

A. That feature or type of interlocking does not have anything to do with the location of them so far as their relative position peripherally, but it does locate them exactly with regard to their position, considered radially, and that is all that the claim is intended to cover.

Q. Now, as a matter of fact, Mr. Reynolds, that is no interlocking of the segments at all, is it, it is nothing more or less than a telescopic connection that is covered by every wooden pipe concern that makes wooden pipe for either sewers or for drainage purposes or for irrigation purposes, it is covered by the same sort of a telescopic connection

that connects sewer pipe or gas pipe or water pipe, is it not, and stove pipe?

A. The interlocking engagement that is referred to by those claims may be considered to be common, it is correct, in regard to that of ordinary stove pipe, that is, one fits inside of the other, but it prevents movement in a direction of a diameter or radius, but does not prevent a twisting movement.

The witness then testified that both types of interlocking was shown in figure 2, but that in the claims only one type is covered in one claim, and in the other claim that refers to interlocking both types are included.

Q. Do you mean that a part of your claim here is a uniform size of wedge "13"?

A. The wedge is intended to take up inequalities.

Q. Do you mean that the uniform length of sill 6 is a part of your claim?

A. Not by any means whatever.

Q. Do you mean that the uniform length of those other braces has anything to do with it?

A. The length of character of those braces has nothing whatever to do with the claims 1, 5 and 6, as they are not mentioned in it in any way whatever.

Q. They are a part of the means, though, of wedging out the segments against the templet, aren't they?

A. They are no part, whatever, of the means as specified in any one of these three claims.

Q. Answer my question.

A. No, they are not.

Q. They are no part of the means of wedging out the segments against the templet?

A. Yes, but that is different.

Q. Well, that is what I am asking you?

A. They are no part whatever of the combination specified in any one of those three claims, 1, 5 and 6.

Q. They have nothing to do with it?

A. They are parts of other claims which it is not alleged are infringed.

Q. Now, Mr. Reynolds, Mr. Paley's patent or application does include, as a matter of fact, a circular form for molding concrete, doesn't it, with a recess in the invert to receive brick?

A. No sir, it does not. It shows something of that sort, but it makes no reference to it and cannot be construed as including it, only if there were—if it was specifically and directly described and claimed, but neither of which is done in the specification.

Q. Do you, as a patent lawyer, stand here before this jury and say that the drawings are no part of the specifications and claims of a patent?

A. No, I don't. I say that the drawings are, they are one part, but that you cannot construe the patent by looking at the drawings alone, you must read the specifications, and then when you want to know just what the patent does cover you have to go to the claims and consider those, and the specification make no reference whatever of any

kind to that particular construction consisting of the recessing of that surrounding band, nor is there any reference made to it in the claim; and, as I said before, that shows in itself, positively, that at that time he did not consider that any part of his invention and he made no claim to it whatever.

Q. Now, as a patent lawyer, then, do you want the jury to understand that the drawings are no part of the claims?

A. No, I said nothing of the sort whatever. They are one part of the claims—or one part of the patent, but that the patent must be constructed by some other means than a mere inspection of the drawings.

Q. But you have got to take the drawings into consideration, haven't you?

A. Yes, but along with the other parts, namely, the specification and the claims.

Q. Can you disregard the drawings?

A. No.

Q. The drawings of Mr. Paley show, in fact, this invert to receive those brick, don't they?

A. That is merely an inference; there is nothing whatever there to say so, nothing whatever.

RE-DIRECT EXAMINATION

Upon re-direct examination the witness testified that there is nothing to limit the patentee to the use of wood or metal, and that the swelling of the

material could be eliminated, if the latter be introduced.

Witness excused.

Whereupon HARRY GEORGE, being recalled for further cross-examination, was requested by counsel for plaintiff to mark for identification "X" and "Y" the line that he struck by means of the compass. (Witness complies.)

Testimony closed.

Whereupon counsel addressed a motion to the court.

MR.SHANK: I renew my motion made at the close of the plaintiff's case to instruct the jury to return a verdict for the defendant on the grounds as enumerated; that there has been nothing shown to indicate that there was an invention by the plaintiff; that his device is not the product of inventive genius, simply the product of mechanical skill if at all; second, that there has been no infringement of any device by the defendant; third, that the plaintiff's device is not a workable device; fourth, that as shown by the evidence, whatever the device might be, it is a combination of old elements producing an old result and in no wise introduces any new elements in the prior art; fifth, that the prior art has covered all of the elements contained in plaintiff's patent. I don't care to argue the matter. I simply state the motion to the Court.

THE COURT: The Court being convinced that the grounds of the motion are almost wholly, if not

wholly, questions of fact for the jury, it denies the motion and allowed an exception.

MR. SHANK: I desire to preserve the record, if Your Honor please.

THE COURT: Yes. Proceed, gentlemen.

MR. SHEPARD: If Your Honor please, we have handed to Your Honor requests for instructions to the jury and a motion that we desire to make, and I take it Your Honor does not care to hear any argument upon the matter and we will proceed at once to address the jury.

THE COURT: There is one motion contained in your request. Do you wish to embody that in the record?

MR. SHEPARD: Yes, Your Honor. That is the motion to direct the jury to find a verdict for the plaintiff.

THE COURT: Yes. The motion will be denied and exception allowed.

THE COURT: The attorneys for the plaintiff have just handed to the Court a request instruction, the substance of which is in legal effect that if all the elements in any one of the three claims, 1, 5 or 6, are found to be used by the defendant, or the equivalents thereof, that that would be considered an infringement, even though the elements described in the remaining claims were not infringed. I had assumed that this case was tried upon the theory that the patent was for a combination of old elements and that the three claims with the others in the patent resulted in the product that is in dis-

pute here. I would like to hear counsel in support of that request, if they have anything to say.

THE COURT: I understand, Mr. Shepard, that if your claims 1, 5 and 6 or any one of them are for a new element in itself that that could very readily be infringed without an infringement of the others, but where your patent consists not of any new elements, but is the combination of old elements, how could any one of them be infringed without infringing the entire combination, or vice versa, if all of them are not infringed how can any one of them be infringed?

MR. SHEPARD: You refer undoubtedly to what I have just handed you.

THE COURT: Yes.

MR. SHEPARD: Infringement is for a single claim; it may be a single claim; it may not be of all the claims.

THE COURT: Is that conceded by the defendant?

MR. SHANK: No, not at all, Your Honor.

THE COURT: Very well, I will hear you.

The foregoing testimony and exhibits include all of the evidence introduced by either party, relating to the facts upon which the questions of law in the case hinge. Case closed except argument.

The plaintiff thereupon before the jury retired and before argument of the cause in writing requested the Court to instruct the jury, among other things as follows:

First Instruction. The jury are instructed to return a verdict for the plaintiff with nominal damages of six cents. Which instruction the Court refused to give, and thereupon, the plaintiff, by his counsel excepted in writing to the refusal of the Court to give the aforesaid instruction, and said exception was by the Court allowed.

Second Instruction. The issue of letters patent is of itself presumptive of prima facie evidence that the invention patented is new and useful and the patentee is the first and true inventor. The defendant has not produced any evidence that overthrows this presumption; and the jury are therefore charged to find for the plaintiff on those issues; that is, that the plaintiff was the true and first inventor and the combinations described in the first, fifth and sixth claims were and are new and useful.

Which instruction the Court refused to give, and thereupon, the plaintiff, by his counsel excepted in writing to the refusal of the Court to give the aforesaid instruction, and said exception was by the Court allowed.

Third Instruction. There are three questions of fact to be decided by the jury: (1) Whether the plaintiff's invention was a novel one when he made it; that is, whether the same thing in substance or legal effect had been made, known or used before the plaintiff invented it; (2) Whether the device used by the defendant infringed the plaintiff's patented device; (3) What damage resulted to the

plaintiff if the defendant did infringe the plaintiff's patent.

Which instruction the Court refused to give, and thereupon, the plaintiff, by his counsel excepted in writing to the refusal of the Court to give the aforesaid instruction, and said exception was by the Court allowed.

Fourth Instruction. This patent is a combination patent. The question is not whether the different parts or elements of the patented invention are new or old, but whether the total group or combination of parts stated in any one of the claims, 1, 5 and 6 is new or old. The patent law allows a patent to be granted for a new and useful combination of parts every one of which by itself is old and well known and was used long before the patent.

Which instruction the Court refused to give, and thereupon, the plaintiff, by his counsel excepted in writing to the refusal of the Court to give the aforesaid instruction, and said exception was by the Court allowed.

Fifth Instruction. The means used for bracing, either by bars or sticks or by semi-circular or arched pieces, at the ends of the section or between the ends are not claimed as part of the patented combination in any of the claims 1, 5 and 6; and the use or non-use of either method of bracing has nothing to do with the questions of infringement or novelty.

Which instruction the Court refused to give, and thereupon, the plaintiff, by his counsel excepted in writing to the refusal of the Court to give the afore-

said instruction, and said exception was by the Court allowed.

Sixth Instruction. To constitute an infringement of a combination, there must be a use of the entire combination or group of co-operating parts, constituting the combination, either by using a literal copy of those parts or by substituting for one or more of the parts mechanical equivalents. If mechanical equivalents are used, they accomplish infringement equally as well as if only literal copies or duplicates of those parts are used, provided the total combination accomplishes the same new and useful result which the patented combined device does.

Which instruction the Court refused to give, and thereupon, the plaintiff, by his counsel excepted in writing to the refusal of the Court to give the aforesaid instruction, and said exception was by the Court allowed.

Seventh Instruction. A mechanical equivalent is something which performs the same function, or produces the same effect as a part of the total combination, and in substantially the same way, as the part for which it is substituted.

Which instruction the Court refused to give, and thereupon, the plaintiff, by his counsel excepted in writing to the refusal of the Court to give the aforesaid instruction, and said exception was by the Court allowed.

Eighth Instruction. If the jury finds that the defendant has used, after the date of granting the

patent and after notice from the plaintiff to desist from such use, the combination of parts described in any one of the three claims 1, 5 and 6, or a combination containing some of those parts or elements and other elements which are mechanical equivalents, performing the same function or operation in substantially the same way and to the same effect, and which are substitutes for the rest of the combination covered by anyone of those three claims then the jury should find that the defendant has infringed the patent in suit.

Which instruction the Court refused to give, and thereupon, the plaintiff, by his counsel excepted in writing to the refusal of the Court to give the aforesaid instruction, and said exception was by the Court allowed.

Ninth Instruction. Infringement is caused by using the whole of a patented combination (including mechanical equivalents) even if something else not patented is added or used besides and along with the patented combination, but not by using less than the entire combination. The jury must therefore find (in order to conclude that the defendant has infringed the patent) that the defendant has used the whole of the combination covered by any one of the three claims, 1, 5 and 6;—keeping in mind the court's instructions as to mechanical equivalents; and if it so finds, and also finds in the plaintiff's favor as to the novelty of the patent, then its verdict should be for the plaintiff.

Which instruction the Court refused to give, and thereupon, the plaintiff, by his counsel excepted in writing to the refusal of the Court to give the aforesaid instruction, and said exception was by the Court allowed.

Tenth Instruction. If any one claim of those sued on has been used by the defendant, it is equally an infringement of the plaintiff's patent right as if all three, or even all the seven claims allowed in the plaintiff's patent were infringed.

Which instruction the Court refused to give, and thereupon, the plaintiff, by his counsel excepted in writing to the refusal of the Court to give the aforesaid instruction, and said exception was by the Court allowed.

Eleventh Instruction. The plaintiff not having shown any royalty, he is entitled to show by general evidence what is a reasonable royalty; and he may show that by evidence of the comparative advantage in economy of time and labor and materials from using his patented device, as compared with any other device open to the public at the same time.

Which instruction the Court refused to give, and thereupon, the plaintiff, by his counsel excepted in writing to the refusal of the Court to give the aforesaid instruction, and said exception was by the Court allowed.

Twelfth Instruction. If the physical or mechanical difference between the plaintiff's patented device and the defendant's device are enough to have secured to the defendant a patent (supposing

that he was the first person who invented those differences), then they do not infringe the patent. If on the other hand, they are mere variations which would suggest themselves to any skilled mechanic in that art, then they have not the quality of invention, and are mere colorable evasions, or mechanical equivalents. The test of invention on the one hand is the test of equivalency on the other hand. That which performs the same function in substantially the same way and with substantially the same result is a mechanical equivalent of what it displaces and is not the fruit of invention.

Which instruction the Court refused to give, and thereupon, the plaintiff, by his counsel excepted in writing to the refusal of the Court to give the aforesaid instruction, and said exception was by the Court allowed.

Thirteenth Instruction. If we compare claim 1 of the patent with the drawings and models of the forms used by the defendant, we find in each the skin or lagging against the outer surface of which the inner surface of the concrete sewer is formed, and this skin or lagging with its lengthwise and crosswise ribs makes the segments; we find in each the outer restraining band which holds the segments from separating by moving away from the center of the sewer and also acts as an end wall to the concrete section in each; we find in each the invert, consisting of segments or members which when fastened in place occupy the outline of the invert at the proper distance for filling up the in-

vert with brick; we find that equally in each contrivance there can be a peripheral motion, that is, a motion along the line of the circle, by one or both of the segments next to the invert, into and within the limits of the invert, although apparently there can be much more of that motion in the plaintiff's forms than in the defendant's; we find that in each form the segments are tightened against each other and against the outer band by wedges inserted at the proper places, and we find in each form a cross bar or sill spanning the invert, like the chord of an inverted arch. In the defendant's forms this sill is in the form of a solid arch, filling the entire arch of the invert and affording a rest or support for the upper segments of the circle. In the plaintiff's device, the sill is only a straight bar or beam, with posts extending from its underside to the joints of the segments in the invert. The only difference in the two devices are the interior bracing by a circle or by radial and other cross braces; the shape of the sill or arc filling the invert, the cutting of the outer band or hoop into two semi-circles in the defendant's form while it is shown in the plaintiff's drawings and model as a single piece, and lastly the precise shape and number of the members of the invert. The bracing is not one of the elements of the first claim, and it is open to any one to adopt any suitable mode of interior bracing. The question for the jury on this claim No. 1 is whether the differences which have just been pointed out are or are not mechanical equivalents—whether the

corresponding things do or do not perform the same function or duty; in plain words do the same work, in substantially the same way and with substantially the same result. That is a question of fact which the jury must decide in the light of the testimony of both expert and non-expert witnesses, of the patent specification, drawings and claims of the models and other exhibits and of their own knowledge of mechanics.

Which instruction the Court refused to give, and thereupon, the plaintiff, by his counsel excepted in writing to the refusal of the Court to give the aforesaid instruction, and said exception was by the Court allowed.

Fourteenth Instruction. Infringement is not avoided by making in one piece what the plaintiff's patent and drawings, or his actual use of his own invention shown as made in two; or by making in two or more pieces what the plaintiff made or drew in one.

Which instruction the Court refused to give, and thereupon, the plaintiff, by his counsel excepted in writing to the refusal of the Court to give the aforesaid instruction, and said exception was by the Court allowed.

Fifteenth Instruction. If a certain part in the defendant's form does the same work in the same way as the corresponding part in the plaintiff's—if it is a mechanical equivalent—it does not avoid being an infringing device if it does that work more strongly or perfectly or if it also performs

some other function not found in the plaintiff's device.

Which instruction the Court refused to give, and thereupon, the plaintiff, by his counsel excepted in writing to the refusal of the Court to give the aforesaid instruction, and said exception was by the Court allowed.

Sixteenth Instruction. If any one element of a claim in the plaintiff's patent is omitted from the defendant's device, then the defendant does not infringe that particular claim; but on the other hand, if the defendant does use all the elements of that claim or their equivalents and adds something else not in the plaintiff's device, then the defendant does infringe even though the added feature may make the whole contrivance do better or cheaper or faster work.

Which instruction the Court refused to give, and thereupon, the plaintiff, by his counsel excepted in writing to the refusal of the Court to give the aforesaid instruction, and said exception was by the Court allowed.

Seventeenth Exception. The bracing shown in the plaintiff's drawings and model is not an element of any claim in suit in this case; the doctrine of mechanical equivalents does not apply to it; and its use or disuse by either party has no bearing on infringement or any other issue. In view of what every intelligent mechanic must have known about bracing an arc or circle against pressure from outside inward, and of the descriptive matter in the

patent specifications, it was open to any one to use any form of bracing. The jury therefore should disregard all the evidence bearing on the bracing used by each party.

Which instruction the Court refused to give, and thereupon, the plaintiff, by his counsel excepted in writing to the refusal of the Court to give the aforesaid instruction, and said exception was by the Court allowed.

Eighteenth Instruction. A patentee is not confined to any particular form, size, shape or material in embodying or using his invention, unless either he expressly declared he claims only that form, etc., or the invention by its nature confines him to that form, size, shape or material. In neither of these ways is the plaintiff so limited. He expressly says in specifications that he shows the form "which he prefers". Anyone who uses the same elements, or substantially the same design infringes equally with one who uses a literal copy of the design.

Which instruction the Court refused to give, and thereupon, the plaintiff, by his counsel excepted in writing to the refusal of the Court to give the aforesaid instruction, and said exception was by the Court allowed.

Nineteenth Instruction. By comparing the models and drawings showing the device used by each party, the jury can test the charge by the plaintiff that his fifth claim infringed. In each it is plain to every one that certain elements—the segments, with their lengthwise and crosswise ribs, and the

outer band, also acting as an end wall—are the same. It is for the jury to judge in the light of all these exhibits and also of the testimony of the witnesses, whether the means for expanding or tightening the segments peripherally—that is, along the line of the circle—against the outer band are the same or are mechanical substitutes one for the other. And also whether the defendant has used the interlocking device by which the ends of the segments of one mold join to or lap over the ends of the segments of the adjoining mold. If all the elements of the fifth claim have been used by the defendant either by literally copying them, or by substituting mechanical equivalents, then the defendant has infringed that claim.

Which instruction the Court refused to give, and thereupon, the plaintiff, by his counsel excepted in writing to the refusal of the Court to give the aforesaid instruction, and said exception was by the Court allowed.

Twentieth Instruction. In the same manner, the jury should compare the plaintiff's and the defendant's devices as to the sixth claim of the patent. It is for the jury to decide whether the defendant's device contains either in the same form or by mechanical equivalents all the elements of the sixth claim. Unquestionably it contains some of them, such as the segments and the outer restraining band with its effect for the invert; and as to those which are not precisely alike, it is the province of the jury to decide whether the corresponding parts in the

two devices are mechanical equivalents. If they are such mechanical equivalents, and if by that test all the elements of the plaintiff's claim 6 are found in the defendant's device, then the sixth claim is infringed and the plaintiff is entitled to your verdict on that claim.

Which instruction the Court refused to give, and thereupon, the plaintiff, by his counsel excepted in writing to the refusal of the Court to give the aforesaid instruction, and said exception was by the Court allowed.

Twenty-first Instruction. In view of the argument of counsel to the jury, the plaintiff requests the Court to charge the jury that the omission by the defense of some one element of a combination covered by one claim sued on, does not avoid infringement of another claim sued on if the defendant uses all the elements in the latter claim. In other words infringement is caused by using the entire combination covered by any one claim in suit, no matter if the defendant does not use the entire combination covered by some other claim in suit.

The interlocking device is an essential element in the fifth claim and that claim is not infringed unless the defendant uses it even if the defendant uses everything else in that claim. But the first and sixth claims do not contain that element and therefore they may be infringed by the use of all their element without the interlocking device.

Which instruction the Court refused to give, and thereupon, the plaintiff, by his counsel excepted in

writing to the refusal of the Court to give the aforesaid instruction, and said exception was by the Court allowed.

Counsel then proceeded with their argument; and the Court having announced that he would submit the cause to the jury, the plaintiff, not waiving his prayer for instructions and his exceptions to the refusal thereof, and thereupon the Court instructed the jury as follows:

COURT'S CHARGE TO THE JURY.

THE COURT:

Gentlemen of the Jury: This is an action at law for the recovery of damages for the alleged infringement of a patent. The action is in the nature of an "action on the case" and is brought pursuant to section 4919 of the Revised Statutes of the United States.

The first and second paragraphs of plaintiff's declaration are as follows:—

"That the plaintiff, Henry W. Bassett, is, and at all the times hereinafter mentioned, was, a resident of the City of Seattle, King County, Washington, and a citizen of the said District of Washington, Northern Division.

"That the defendant, The Erickson Construction Company, is, and at all times hereinafter mentioned, was, a corporation organized and existing under the laws of the State of Washington, and is, and at all

times herein mentioned, was engaged in the business of constructing sewers in the City of Seattle, King County, Washington, and in the Western District of Washington, Northern Division, and that it is maintaining, and at all the times herein mentioned, has maintained its office and principal place of business in the said City, County, State, District and Division.”

The defendant has not denied the allegations of either the first or second paragraphs of the Declaration, and you are instructed that as a matter of law the same are admitted to be true.

The material portion of the third paragraph of the plaintiff's declaration is as follows:

“That heretofore, and prior to the 18th day of March, A. D. 1910, the plaintiff, Henry W. Bassett, was the true, original, and first inventor of certain new and useful improvements in Forms for Molded Conduits.”

It is incumbent upon the plaintiff to prove the foregoing quoted portion of the third paragraph of his declaration, which he *prima facie* does by the introduction in evidence of his patent. This paragraph pleads additional matters in substance to the effect that the device was not previously patented or described in any printed publication for the period therein referred to or in public use or on sale for the period therein indicated, nor was the same abandoned nor proven to have been abandoned, and that the same was not patented in any foreign country or any application filed

more than twelve months prior to plaintiff's application. The Court instructs you that these latter allegations of the third paragraph of the declaration are immaterial and unnecessary, and it is not incumbent upon the plaintiff to prove the same.

The substance of the fourth paragraph of the plaintiff's declaration is to the effect that on the 18th day of March, 1910, he filed his application for a patent and that on the 25th day of April, 1911, letters patent of the United States, for his invention was delivered to him the same being numbered 990417, and that by virtue of such patent plaintiff and his successor in interest were, for a term of seventeen years from the 25th day of April, 1911, granted the exclusive right of making, using and vending to others to be used, the improvements mentioned in his letters patent, and as a part of such paragraph he attaches an uncertified copy of such patent. That the defendant with knowledge of such patent, and in violation of the exclusive rights and privileges secured to the plaintiff thereby, and in disregard of the same and to the damage of the plaintiff, has since the date of plaintiff's patent continually from that time to the time of filing of the declaration, and without the license or consent of plaintiff, made and used the device in question in the City of Seattle, State of Washington, and within the Northern Division of the Western District. That defendant during such time made and used forms for molding conduits containing constructions which are either identical

with, or mechanical equivalents of, the construction in material parts thereof, substantially the same in construction and operation and fully embracing and containing the invention described, claimed and patented in such patent, particularly of claims 1, 5 and 6. At the trial it has been conceded by the plaintiff that only claims 1, 5 and 6 are the ones claimed to be infringed.

The fourth paragraph further alleges that the molding conduits made and used by the defendants were and are, and that each of them is, and was, an infringement upon plaintiff's letters patent, and that the same were made and are being made and used according to the specifications of such patent. That the plaintiff made and used said patented invention for his own exclusive use and benefit, and did not manufacture the same for sale, but that he caused notice to be given to the defendant of his rights and of its infringement, and alleges that the defendant had full knowledge and notice of all the rights of the plaintiff in the premises.

You are instructed that it is incumbent upon the plaintiff to prove the allegations of the fourth paragraph of his declaration relating to notice and the alleged infringement of plaintiff's device by the defendant, by a fair preponderance of the evidence.

The fifth paragraph of the declaration alleges in substance that the plaintiff has been damaged by reason of the matters alleged in his declaration in the sum of Thirty Thousand Dollars, which sum

he alleges to be only the actual damage sustained by him.

You are instructed that it is incumbent upon the plaintiff to prove the material portions of this paragraph of his declaration by a fair preponderance of the evidence.

The defendant by the first paragraph of its answer in legal effect denies that the plaintiff was the true, original or first inventor of any new or useful invention in forms for molding conduits as alleged in his declaration. This denial goes to the material allegations of the third paragraph of the declaration which portion of such paragraph of the declaration you have already been instructed is *prima facie* established by the introduction in evidence of plaintiff's patent. The first paragraph of the answer further denies in substance that it is not true that the alleged invention was not known or used in this country, and not patented or described in any printed publication of this or foreign countries before the plaintiff's alleged invention thereof, or that the same had not at the time of plaintiff's application for a patent theretofore been in public use or on sale for more than two years. As you have already been instructed it was not incumbent upon the plaintiff to allege or prove the matters last referred to as such matters are in the nature of a defense, concerning which you will hereafter be instructed more particularly.

While in the second paragraph of its answer, the defendant leaves to the plaintiff to prove the issuance of the letters patent in question, and his rights thereunder, it expressly denies that such patent granted to the plaintiff the exclusive right for any term to make, use or vend the alleged invention throughout the United States or any right whatsoever. You are instructed that this allegation puts the plaintiff upon his proofs that such patent was issued to him but if you find that it was, you are instructed that the patent is *prima facie* evidence that he was the original inventor of the device in question, and that the same was a patentable device. By the third paragraph of its answer the defendant in substance denies that at the time alleged in the declaration, or at any time, it made, used or vended the forms of molded conduits containing and embracing the invention set forth and covered by the letters patent sued on. It denies that it in any way infringed upon the exclusive rights, or any rights, of the plaintiff, or intended so to do, and it denies that it has derived or realized any profits which the plaintiff would have derived from his alleged exclusive rights, and denies that the plaintiff is deprived of any royalty, or has incurred any damages by any wrongful or unlawful acts of the defendant. By these allegations the plaintiff is put upon his proof and is required to establish the truth of the matters denied by a fair preponderance of the evidence.

By the fourth paragraph of its answer the defendant in substance denies that the plaintiff was the original and first inventor or discoverer of the invention purporting to be covered by the letters patent mentioned in plaintiff's declaration, or any material or substantial parts thereof. By this denial the plaintiff is put upon his proofs and required to establish that he was the original and first inventor or discoverer of the invention purporting to be covered by the letters patent in question, or of any material or substantial parts thereof, which, as you have been instructed, he *prima facie* does by his patent.

The fourth paragraph of the answer further in substance alleges, that the device in question, or material or substantial parts thereof, had been in public use and on sale in this country prior to said alleged invention by the plaintiff, and for more than two years before the plaintiff's application for letters patent, and further that the same had been described and illustrated in printed publications and patents prior to the date of the supposed invention of the plaintiff. As to these allegations the Court instructs you that it was incumbent upon the defendant to prove the same beyond a reasonable doubt and that by reason of failure of the defendant to properly plead such matters, excepting as to prior patents, the defendant was not permitted to introduce testimony in support of these allegations and you are instructed that there is no evidence in this cause that the patented device in question, or

material or substantial parts thereof, had been in public use and on sale in this country prior to said invention and for more than two years before plaintiff's application for letters patent, or that the same had been described and illustrated in printed publications prior to the date quoted for the supposed invention of the plaintiff, unless you find the same to have been described in exhibit "N", being Reid on Concrete and Re-inforced Concrete Construction, which publication the Court admitted under the testimony of the plaintiff, to the effect that he had had such publication in his possession prior to making his application for a patent. His testimony to this effect was somewhat indefinite and if you should find that he did not have such publication in his possession prior to his application for a patent, you will wholly disregard the same."

Counsel for plaintiff thereupon, before the jury retired from the bar, duly excepted in writing to the several matters of law contained in that portion of the Court's charge, which refers to Reid on Re-inforced Concrete, and said exception was by the Court allowed. And the Court further instructed the jury as follows:

As to exhibits "A, B, C, D, E" and "F", being respectively patents to Barnett, No. 628382; patent to Morris No. 837328; patent to Boswell No. 870269; patent to Dooley No. 910046; patent to Naas No. 209976; patent to DePaolis No. 826057; you are instructed that the same were not offered or admitted in evidence for the purpose of showing that plain-

tiff's patent had been anticipated, or to show want of novelty in plaintiff's patent, but only for the purpose of showing the state of the art at the time, since under the testimony of witness Reynolds, the plaintiff's patent attorney, it appears that these patents were in his possession as attorney for the plaintiff, prior to the last amended application of the plaintiff, and of which plaintiff would be chargeable with knowledge.

As to exhibits "S, T, U, V, W, X, Y" and "Z", the same were admitted without objection from the plaintiff, but not for the purpose of showing that plaintiff's patent had been anticipated or to show want of novelty in plaintiff's patent but only for the purpose of showing the state of the art at the time, and which you will be authorized to consider for that purpose.

By the fifth paragraph of the defendant's answer it alleges in substance, that the letters patent sued upon are invalid for want of patentable invention. You are instructed that the letters patent are prima facie evidence that the device was patentable and it is incumbent upon the defendant to establish the contrary by a fair preponderance of the evidence.

By the sixth paragraph of the defendant's answer, it alleges in substance, that the invention of the plaintiff had been abandoned to the public prior to the plaintiff's application for a patent therefor. You are instructed that there is no evidence to support this allegation and you should disregard it.

By the seventh paragraph of its answer the defendant in substance denies that the invention patented by the plaintiff is of great or any utility or value. You are instructed that the test is not that it should be of great utility and value. While the device must be capable of some beneficial use, it will be deemed useful when it will operate to perform the functions and secure the result intended. While utility is essential, any utility, however slight, will be sufficient. It is not essential that the invention should be the best of its kind or incapable of improvement, or that it should accomplish all that the inventor claimed for it.

Where minor matters of detail in the construction of a patented machine, which render it incapable of practicable working, do not affect the substance of the invention claimed, and can be removed by mere mechanical skill without the exercise of the faculty of invention, the patent is prima facie evidence of utility, but it is incumbent upon the defendant, by a fair preponderance of the evidence, to establish that the patented device in question has no utility to perform the functions intended.

The seventh paragraph of the answer further alleges in substance that the device in question has not been introduced into public use, or used by the public generally, nor has the public acquiesced in and acknowledged the complainant's exclusive right of the same, or any portion thereof. You are instructed that these allegations are immaterial and

not a defense, and that it is of no consequence whether the utility of the alleged invention be general or limited to a few cases, especially is this true as the plaintiff alleges that the same was for his exclusive use.

The seventh paragraph in the answer further in substance alleges that the plaintiff so limited his application for a patent that he cannot now seek for, or obtain a construction of the claims contained in the patent sufficiently broad to cover the construction used by the defendant.

The claims in the patent in question are those numbered 1, 5 and 6 which are as follows:

“1. An inner form for molded conduits comprising longitudinal segments adapted to outline the invert, other longitudinal segments adapted to outline the remainder of the conduit, a restraining band adapted to surround and locate said segments and having its inner edge recessed to hold the invert segments enough farther from the center than the segments adjoining to permit the edges of the latter moving peripherally within the invert segments, and means for peripherally expanding those segments above the invert.

5. An inner form for molded conduits, comprising longitudinal segments composed of outer lagging and ribs secured thereto, said ribs including transverse ribs at each end, the transverse rib at one end projecting beyond the ends of the lagging and at the other end the lagging extending beyond the rib, whereby interlocking engagement between segments

may be obtained, said segments also having longitudinal ribs at their side edges adapted to engage those of adjacent segments to form an arch, an independent, radially extending rib surrounding the outer ends of the segments and acting as a restraining band and a temporary end wall for the mold section, and means for expanding the segments peripherally against this band.

6. An inner form for molded conduits, comprising segments adapted to outline the invert, one of said segments being removable inwardly, another set of segments adapted to outline the remainder of the conduit, a restraining member surrounding the segments and having an off-set outline at the edges of the invert section, whereby the adjacent segments may slide one over the other, transverse sills spanning the invert segments and serving as an abutment for the other segments, and means for keying the segments outwardly from said sills against the restraining member.”

In this connection you are instructed that the letters patent to plaintiff are prima facie evidence that the device therein referred to was patentable and that it possessed both novelty and utility, also that patentee was the original and first inventor, or discoverer, and if upon a consideration of the entire testimony you are not satisfied that the defendant has established the contrary by a fair preponderance of the evidence, it becomes a question of fact for your determination as to whether or not the device

used and constructed by the defendant infringed the one patented to the plaintiff.

The eighth paragraph of the answer in substance alleges that the forms of molded conduits used by the defendant at the time this suit was brought “and at all times prior thereto” and at this time, was a form for molded conduits in common use in the City of Seattle and elsewhere “long prior to the date when the said Bassett applied for his letters patent.”

You are instructed that under the provision of Section 4920 of the Revised Statutes of the United States, it is incumbent upon the defendant to especially plead, among other defenses the following: “that it (referring to the patented invention involved in the suit) had been in public use or on sale in this country for more than two years before his (plaintiff’s) application for a patent, or had been abandoned to the public.” The allegation last referred to is not a compliance with this statute and you are instructed that there is no evidence in the record to support the same.

The eighth paragraph of the answer further alleges in substance that the plaintiff made his original application describing in his specifications therefor, the form of molded conduits in exact matter and substance covering in detail the form of molded conduits now used, and at all times heretofore used by this defendant, and that his application therefor was denied in toto by the commissioner of patents, further that the plaintiff on several occasions amended his specifications and claims, and finally

procured letters patent limited to a certain construction therein described, which constructions the defendant alleges are not embodied in the form of molded conduits now being, or heretofore used by the defendant.

The various amended applications referred to are material only in so far as you may find that the same were ultimately embodied in plaintiff's patent. The plaintiff introduced in evidence the record pertaining to the applications in question and you may consider the same together with the other evidence in the case as bearing upon the question of whether or not the plaintiff was the original and first inventor or discoverer of the device described in his patent. As you have already been instructed, you are to determine from the evidence whether or not the device used by the defendant infringes the one patented to the plaintiff, and that it is incumbent upon the plaintiff to establish such infringement by a fair preponderance of the evidence.

The ninth paragraph of the answer is a denial of plaintiff's damages and it is incumbent upon the plaintiff to prove his damages by a fair preponderance of the evidence.

The tenth paragraph of the answer is in legal effect a denial that the defendant's device infringes that patented to plaintiff.

The eleventh paragraph of the answer is in the nature of a legal conclusion and if not, there is no evidence to the effect that the plaintiff is not the owner of the patent in question.

To this answer the plaintiff filed a reply in which he denies each and every allegation contained in the defendant's answer.

You will be permitted to take with you to the jury room the declaration, answer and reply for the purpose of more fully ascertaining the allegations thereof, the materiality of which, however, you are to construe in the light of these instructions.

There is a clear distinction between a pioneer invention and an invention merely of improvements by a combination of mechanical devices. A patentee who is the original inventor of a device—a pioneer in the art—is entitled to a broad and liberal construction of his claims; but an inventor who only claims to be an improver is only entitled to what he claims and nothing more. In other words, the original inventor of a device has the right to treat as infringers all who make or use devices operating on the same principle, and performing the same functions by analogous means or equivalent combinations. But if the invention claimed be itself but an improvement or a known device, by a mere change of form or combination of parts, the patentee cannot treat another as an infringer who has improved the original device by use of a different form or combination performing the same functions. The inventor of the first improvement cannot invoke the doctrine of equivalents to suppress all other improvements which are not mere colorable invasions of the first.

Counsel for plaintiff thereupon, before the jury retired from the bar, duly accepted in writing to the several matters of law contained in that portion of the Court's charge, beginning with the phrase in the paragraph above "(There is a clear distinction between a pioneer invention)" and particularly to that passage of it which says, "But if the invention claimed by itself is but an improvement on a known device, by mere change of form of combination of parts, the patentee cannot treat another as infringer who has improved the original device by use of a different form or combination performing the same function." And said exception was by the Court allowed.

And the Court further instructed the jury as follows:

In determining the question whether or not the device patented by the plaintiff was a pioneer device, you should take into consideration the prior state of the art, and if you find from the evidence that plaintiff's patented device was a pioneer device, and you should further find from the evidence that the device made and used by the defendant operated on the same principle and performed the same functions by the same means, or by analogous means, or by equivalent combinations, then you are instructed that the device of the defendant would constitute an infringement on the patented device of the plaintiff. If on the other hand you should find from the evidence that the patented device of the plaintiff was not a pioneer device, but that it consisted merely

of an improvement or improvements upon prior devices, and that all of the elements contained in the plaintiff's device were old elements, and that the claim of the plaintiff consisted merely of a combination of old elements, in such case the plaintiff would be limited to the precise device and combination shown and claimed in his patent and in that case if you find that the device made and used by the defendant, was not the precise device or combination shown and claimed by the plaintiff in his patent, you are instructed in such case that the defendant's device would not infringe the plaintiff's device even though the defendant's device operated on the same principle and performed the same functions by analogous means or equivalent combinations. In this connection you are entitled to consider the admission of the plaintiff repeatedly made during the trial, that all of the elements contained in his patent are old, his claim being that the only new feature therein is the combination of the old elements.

Counsel for plaintiff thereupon, before the jury retired from the bar, duly excepted in writing to the several matters of law contained in that portion of the Court's charge, beginning in the paragraph above, "If on the other hand you should find from the evidence that the patented device of the plaintiff was not a pioneer invention," and particularly to that part which says, "in such a case the plaintiff would be limited to the precise device and combination shown and claimed in his

patent, and in that case if you find that the device made and used by the defendant was not the precise device or combination shown and claimed by the plaintiff in his patent, you are instructed in such a case that the defendant's device would not infringe the plaintiff's device, even though the defendant's device operated on the same principle and performed the same functions by analogous means or equivalent combinations," and which ends, "In this connection you are entitled to consider the admission of the plaintiff made repeatedly during the trial, that all of the elements contained in his patent are old, his claim being that the only new feature therein is the combination of the old element," and said exception was by the Court allowed.

And the Court further instructed the jury as follows:

The defendant claims that the plaintiff's device is not a patentable invention. If the defendant has by a fair preponderance of the evidence satisfied you that having in view the entire prior state of the art, the combination claimed for plaintiff's device would readily occur to any person skilled in the art, then you are instructed that such device is the result of mere mechanical skill as distinguished from patentable invention, and that such results are not patentable. But in this connection you are instructed that the patent issued to plaintiff is *prima facie* evidence that the device was patentable and not the result of mere mechanical skill, and it is incumbent upon the defendant to

overcome such presumption by a fair preponderance of the evidence.

The defendant also claims that the plaintiff's device is not a workable device and that it will not perform the functions claimed or intended therefor. In this connection you are instructed that while the issuance of the patent is not conclusive evidence on the question of utility, it is *prima facie* evidence thereof. The presumptions of law are in favor of the patent and the burden is on the defendant to prove by a fair preponderance of the evidence that the device is not useful in any degree. As you have already been instructed, the device is workable and useful if it will perform the functions claimed therefor, even though not in the best way. If it has even slight utility it is sufficient to support the patent. And in this connection, if you find that the device of the defendant has infringed that of the plaintiff, then you are instructed that the defendant is estopped to claim that the plaintiff's device possessed no utility, because use implies utility. It is fair to presume that a person using an invention would not do so if he thought it of no utility and he is in that case estopped to deny that it possesses utility.

The testimony of expert witnesses has been received in this case. You are instructed that an expert witness is one who is skilled in any particular art, trade or profession, being possessed of peculiar knowledge concerning the same, acquired by study, observation and practice.

Expert testimony is the opinion of such a witness based upon the facts in the case as shown by the evidence. You are not bound to accept such testimony as conclusive and it is to be accepted or rejected by you according to your own view of its fallacy or truth, and as you may find such opinions to be founded upon the known or proven facts in the case. Their statements of fact are simply to be weighed, like those of all other witnesses, by their ability and disposition to disclose the truth; and their opinions are to be followed when, in your judgment, they are supported by the facts from which they are deduced.

You are instructed that you are the sole and exclusive judges of the facts in this case and you must determine what the facts are but the law you must take from the Court. You will disregard anything counsel may have said to you in their argument on the facts in this case, or upon any matter addressed to the Court except in so far as their statements may be sustained by or properly inferable from the testimony in this case.

You are the sole and exclusive judges of the credibility of the witnesses who have testified before you. In determining the weight or credit you desire to attach to the testimony of any witness you will have the right to take into consideration and it is your duty to do so, the demeanor of the witnesses upon the witness stand, their opportunity of knowing about the things to which they have testified, their interest or lack of interest in this case, the reason-

ableness of the story of the several witnesses who have testified before you, their demeanor and manner of testifying, and from all of these determine where the truth in the case is.

In determining the weight or credit you desire to attach to the testimony of any witness you should apply the same tests as you would to any person in the ordinary affairs of life whose truth or falsity is to be considered by you. Harmonize the testimony of all the witnesses who have testified before you, and if this can be done in theory consistent with the truth, you must do so, but if you find any witness has wilfully testified falsely concerning any material matter or fact in this case, you have the right to disregard his entire testimony except in so far as you find it corroborated by other credible witnesses and circumstances or known facts detailed and developed upon the trial.

You are instructed that the preponderance of the evidence is not alone determined by the number of witnesses testifying to any particular fact in the case but the testimony of the greatest convincing power, the testimony which has the most convincing power with you, whether one or many witnesses testify to such fact, and in determining where the preponderance of the evidence is in this case, you should take into consideration the demeanor of the witnesses upon the witness stand, the opportunity of the witnesses for knowing about the things concerning which they have testified, the probability of the stories of the several witnesses, the interest

or lack of interest of the several witnesses who have testified before you, and take in connection with all this, the circumstances as detailed by the witnesses upon the witness stand in the trial of this case, and from all these, determine where the preponderance of the evidence is, or, in other words, where the greater weight of the evidence is, or the truth is in this case, and when you have determined that, you will have determined where the preponderance of the evidence is, and if you should find it is equally balanced, that is, it does not preponderate one way or the other, you should find against the party upon whom the burden of proof upon that issue lies.

You will consider this case in a dispassionate manner without sympathy or prejudice for one side or the other, and as twelve honest men determine this case between these two litigants the same as if they were individuals, and the same as you would want twelve men to pass on the matter if you were one of the interested parties.

At the conclusion of plaintiff's case the defendant moved the Court to instruct the jury to return a verdict in its favor, which motion is renewed after all the testimony was in. Plaintiff also requested the Court to instruct the jury to return a verdict in his favor. Each of these motions were denied. They were solely addressed to the Court and were not for your consideration and you should disregard the same, and the respective rulings thereon.

Twelve of your number must agree upon a verdict in this case and when you have agreed upon a verdict you will have your foreman sign it and report to the Court. Upon your retirement you will appoint one of your number foreman.

The pleadings, exhibits that have been admitted, and forms of verdict will be sent to you to the jury room.

You are instructed that under the evidence in this case as a matter of law, in case you should find for the plaintiff, you can only return a verdict for nominal damages which should not be to exceed one dollar.

You will have two forms of verdict submitted to you in this cause, which, omitting title of court and cause, are as follows:

“We, the jury in the above entitled cause, find for the Plaintiff and assess his damages in the sum of One Dollar.”

If you find for the plaintiff have your foreman sign and return the foregoing form of verdict. If you find for the defendant, the following will be your form of verdict:

“We, the jury in the above entitled cause, find for the Defendant.”

Should you find for the defendant you will cause your foreman to sign the latter form of verdict and return the same into court.

THE COURT: Mr. Bailiff, you may clear the court room.

(All parties vacated the court room except the jury remaining to deliberate on its verdict.)

January 22, 1913, 5:15 o'clock P. M.

Counsel for the respective parties being present and the jury in the box, proceedings continued as follows:

THE COURT: Gentlemen of the jury: You have request an additional instruction in this case and I have sent for the reporter and had the attorneys for the respective parties present before giving the instruction.

Your request was submitted in writing and reads as follows:

“Will a duplication of one individual element be an infringement, or, would it require a duplication of all elements to constitute an infringement?”

It has been admitted by the plaintiff in this case that his patent is not for any individual element or elements claimed to be new, but consists of a new combination of old elements. This combination is set forth in the respective claims of the patent, and I think that for the purposes of your inquiry each claim would be considered separately by itself, but in so considering it before you could find that that particular claim or any particular claim had been infringed, that is in the event that you find this was not a pioneer patent, as you were more fully instructed in the original instructions, if you should find that this was not a pioneer patent, then as

you take up each claim of the patent, No. 1, 5 and 6, before you can find an infringement upon any one of those claims you must find that the defendant has used all the elements there in exactly the same way to produce the same result; if you find that that is not the case, then there has been no infringement upon that claim, in the event you should find it not to be a pioneer invention; if you should find it to be a pioneer invention, then the use of equivalents to produce the same result would constitute infringement.

Does this answer your inquiry?

SEVERAL JURORS: Yes sir.

Counsel for plaintiff thereupon, before the jury retired from the bar, duly excepted in writing to the several matters of law contained in that portion of the Court's additional charge, which is hereinbefore set out, and said exception was by the Court allowed.

The jury then retired in charge of the bailiff. After a short absence the jury returned a verdict for the defendant.

Plaintiff's Exhibit 1—Letters patent.

- | | | |
|---|---|--|
| " | " | 2—Letter, including blue print. |
| " | " | 3—Paper. |
| " | " | 4—Model. |
| " | " | 5—Paper, application. |
| " | " | 6—Model. |
| " | " | 7—Document, file wrapper and contents. |
| " | " | 8—Contract. |

“	“	9—Paper.
“	“	10— “
“	“	11— “
“	“	12— “
“	“	13— “
“	“	14— “
“	“	15— “
“	“	16— “
“	“	17— “
“	“	18— “
“	“	19— “
“	“	20— “
“	“	21— “
“	“	22— “
“	“	23— “

Defendant's Exhibit A—Copy of Barnett patent.

“	“	B—Copy of Morriss patent.
“	“	C—Copy of Boswell patent.
“	“	D—Copy of Dooley patent.
“	“	E—Copy of Naas patent.
“	“	F—Copy of DePaolis patent.
“	“	G—Blue print.
“	“	H—Photograph.
“	“	I—Drawing or blue print.
“	“	J—Model of patent.
“	“	K—Model.
“	“	L—Document.
“	“	N—Reid on Concrete and Con- crete Construction.
“	“	O—Photograph.
“	“	P— “

“	“	Q—Model.
“	“	R—Forms.
“	“	S—Paper.
“	“	T— “
“	“	U— “
“	“	V— “
“	“	W— “
“	“	X— “
“	“	Y— “
“	“	Z—Bundle of papers.

That each of said exhibits be attached to and form a part of said proposed bill of exceptions.

In the United States District Court for the Western District of Washington, Northern Division.

No. 2059

HENRY W. BASSETT,

Plaintiff,

vs.

THE ERICKSON CONSTRUCTION COMPANY, a corporation,

Defendant.

ASSIGNMENT OF ERRORS.

Comes now Henry W. Bassett, plaintiff in error herein, by Richard J. Cook, his attorney, and particularly specifies the following as the errors upon which he will rely and which he will urge upon the prosecution of his Writ of Error in the above entitled cause.

I.

That the United States District Court, in and for the District of Washington, Northern Division, erred in overruling objection of counsel for plaintiff in error to question asked of witness Bassett in reference to a form of construction, said witness was using in performance of a contract prior to the filing of his application for a patent of which no relation had been established as to the form of construction used in the performance of that contract, and the structure embodied in his patent.

Q. How long did it take you to set up that first section?

A. I believe it was a couple of days before we got the first section—

Q. Then how long did it take you after you got those forms set up to pour the first section?

A. I believe we poured the first section there in a day.

Q. Didn't you have to tear the whole thing to pieces to get it down?

A. No.

Q. Didn't you in fact when you set up that section fail to make a calculation as to what would be the effect upon the invert there and when you got your concrete poured the invert was fastened in there by the edges of your concrete and you had to chop out the center segment in order to get out your invert?

A. No sir.

Q. Did you ever use the form of braces that you are exhibiting here to the jury?

A. I believe we did, I don't remember just the exact location; there was seven miles of that sewer and so many different sections operated upon that I would not remember exactly.

Q. Don't you claim in your patent that one of the particular elements is this matter of your bracing?

A. I claim the whole thing is a combination together.

II.

That the Court erred in overruling objection of counsel for plaintiff in error to the following question asked of witness Bassett, as to the size of segments used in his device, and in permitting said witness to testify over said objection at the trial of said cause.

Q. In making these segments did you at once determine the size that you would construct?

MR. SHEPARD: We object to that as immaterial.

THE COURT: Let me ask: does the patent claim anything as to the size of the segments.

MR. SHANK: No, Your Honor, but the patent shows three segments in the upper half and this shows five.

MR. SHEPARD: That is merely illustrative, there is not a word in the patent on it.

THE COURT: It is illustrative of what you claim to be the patent. Objection overruled.

MR. SHANK: I should say that the patent shows four and this shows six, to be exact.

A. I believe we did, yes sir.

Q. What was your object in doing it?

A. To handle easier.

III.

That the Court erred in overruling the objection of counsel for plaintiff in error, to the following question asked of witness Bassett on RE-CROSS EXAMINATION as to what particular element in his first claim was infringed, and in permitting said witness to answer said question over the objection of counsel for plaintiff in error.

MR. SHEPARD: We object to that as immaterial, because we don't claim any particular element, that is any one element is infringed, but the suit, the action is brought for an infringement of the combination. This is a combination patent and nothing else.

THE COURT: Your associate counsel stated a moment ago that it was only claimed specifications 1, 5 and 6 were the ones that were infringed. The declaration says that those are the ones that are particularly infringed. I would like to know what the construction is that counsel places on it.

MR. SHEPARD: We do not in this action claim anything for any infringement except on those three claims. Each of those claims is a combination claim because the whole patent is a combination patent.

THE COURT: Well, it is proper for the patentee to say in what particular those three specifi-

cations have been infringed. I don't know how we are going to know unless we are told.

MR. SHEPARD: He may state in what particular they have been infringed, but the infringement is not of any one element.

MR. SHEPARD: Your Honor will pardon me a moment. Speaking of the elements in patent law it means not the separate numbered claims, but the elements making up the combination.

A. I have not familiarized myself with those points. In fact I have not read them over for a long, long time and to go to work and designate each particular point from the numbers in the letters patent I couldn't do it.

Q. Now, Mr. Bassett, I want to ask you what particular element in your claim 6 you claim that we are using?

A. That is this peripheral motion here and the—No. 6—and the chance of wedging these away from the end—

Q. That is for the jury to say. You state the particular element there that you claim we are using.

A. It is this peripheral motion whereby these upper segments are permitted to slide down over here and rest against this No. 6 sill and wedge away from that.

IV.

That the Court erred in overruling the objection of counsel for plaintiff in error to the following question asked of witness Bassett, and in permit-

ting said witness to answer said question over the objection of counsel for plaintiff in error.

Q. Don't you know as a matter of fact that upon your first application every claim you asked for was rejected by the commissioner of patents?

MR. SHEPARD: We object to that as not the best evidence. The records of the patent office will show that.

THE COURT: Objection overruled.

A. It was not. No sir. I don't think so. Mr. Reynolds was my attorney; I never knew the communications, in fact never saw the communications he had with the patent office.

Q. Did you ever sign more than one application?

A. Why, I did, yes.

Q. How many did you sign?

A. I think there was three, if I remember correctly.

Q. Wasn't there four, as a matter of fact?

A. There might have been.

Q. Why did you sign four applications?

A. Mr. Reynolds told me that they would not allow all that we were asking for.

V.

That the Court erred in refusing to permit counsel for plaintiff in error to have expert witness Reynolds, who filed and prosecuted the original application for a patent, enlighten the jury upon the technical contents of the application as originally filed in the patent office, and the changes made

in the form of amendments during the prosecution thereof leading up to final allowance.

Q. Mr. Reynolds, state to the jury what change, if any, was made in the specifications from your original form.

MR. SHANK: The document speaks for itself, if Your Honor please.

THE COURT: Well, is the document long and complicated?

THE WITNESS: If Your Honor will permit me, I can do this in a few minutes and show the jury exactly what changes were made.

THE COURT: Are your changes shown in there?

THE WITNESS: They are in red ink.

THE COURT: I think it will speak for itself.

MR. SHEPARD: We are seeking to do it to enlighten the jury on the subject.

MR. SHANK: The matter as to what may have been done is all recorded here absolutely.

MR. SHEPARD: Yes, but it is a matter of comparison. Now, Mr. Bassett has been cross examined at great length with reference to these changes.

THE COURT: The object of Mr. Bassett's cross examination was an entirely different matter; it went to whether or not he had made any changes subsequent to July, 1908.

MR. SHEPARD: That is changes in his invention.

THE COURT: Changes in his invention.

MR. SHEPARD: But here were changes in the claims of the patent.

THE COURT: Objection sustained.

Q. State whether or not the application was denied in toto.

THE COURT: Objection sustained.

Q. Mr. Reynolds, will you please show the difference in the first claim as originally drawn and in the first claim as finally allowed?

THE COURT: Objection sustained.

Q. State whether or not any changes were made in the original drawings?

THE COURT: Objection sustained.

VI.

That the Court erred in permitting counsel for defendant in error to introduce in evidence uncertified patent office copies during the cross examination of witness Reynolds as to a matter which was anticipatory of the defense as the copies purported to be copies specifically pleaded.

Q. Counsel for the defendant handed witness a copy of Barnett patent and asked him to state if that was a copy similar to the one he received from the patent office, and if he had it in his possession at the time the commissioner of patents rejected his first nine claims and allowed the last two.

MR. SHEPARD: I object to that as immaterial, irrelevant and anticipating the defense which has been specially pleaded.

THE COURT: I don't think it is for the purpose of showing the circumstances of this patent; I don't think that is the object of the testimony at all. Objection overruled.

Witness then testified that he did not have the copy in his possession at the time as he had no opportunity of knowing anything about it, but that he got it afterwards.

Q. And you got this before you made your second application?

A. I didn't make any second application.

Q. You didn't make any second application?

A. No sir, I did not.

Q. What did you do?

A. I amended the present application. Amendment does not change an application; it simply corrects.

Witness then testified that he re-drew certain of those claims to make them conform to the ideas of the examiner, and that he had a copy of Barnett for consideration.

VII.

That the Court erred in permitting counsel for defendant in error to introduce a blue print before the jury during the cross examination of witness Reynolds, of which no reason had been given as to its source or by whom it was made or at the time it was made, and thus permitting said counsel to ask said witness "that if a carpenter had had such a blue print in his possession he could not have made the same thing in order to produce the result of which the plaintiff's invention had sought to accomplish?"

MR. SHEPARD: We object to that as immaterial and irrelevant, as not addressed to the issues before the Court.

THE COURT: Objection overruled.

A. That is a question that is impossible for me to answer for the reason that I have never seen those blue prints.

(Counsel for the defendant produced blue prints.)

MR. SHANK: I ask to have this sheet No. 14, blue print, marked for identification.

THE COURT: He is not trying to prove about the authenticity of the blue print. The objection is overruled.

A. A carpenter might have done so, but whether he would or not is another question.

VIII.

That the Court erred in permitting counsel for defendant in error to introduce a book before the jury during the cross examination of expert witness Reynolds, and asked him the following question to-wit: "Taking that book, would any carpenter have been able to construct the same plans that you here are claiming to be a novel thing and upon which you have sought an invention?" when the name of the book and the date of its publication had not been set forth in the answer.

THE COURT: Objection overruled.

A. I see nothing in these to indicate any form of construction for the molds similar to the construction at issue—and I naturally would infer that it

is not at all certain or evident that a carpenter would have produced the same construction.

Q. Does not that book there in many illustrations contain collapsible forms and give the descriptions as to how it was built and how it can be operated?

A. It shows illustration of collapsible forms.

Q. And are not those collapsible forms made up of segments?

A. Made up of segments, but none of them of the character of the form shown in the patent.

IX.

The Court erred in overruling objection of counsel for plaintiff in error to the following question asked of witness Fitts on cross examination in substance as to why he did not use the bracing and the form that Mr. Bassett perfected a patent upon, and if he did not know that the bracing as put in there absolutely would not work, and in permitting said witness to testify over said objection at the trial of said cause as follows:

A. Not exactly.

Q. Don't you know as a practical operator that if you did pour concrete around a form with that exact bracing that the segment 21 would be forced in by the pressure on the outside without some bracing at that particular joint?

A. Well, if you were to set that form right up on this space here and pour concrete around it for instance, any form—would raise up.

Q. Then I come back to my question, to use that form model 4, don't you know that segment 21

braced as that is would collapse inwardly when you poured that concrete?

A. No, no.

Q. Do you mean to state that segment 21 would not drop in when the concrete was poured around if there were not braces at that point?

A. The brace is at that point.

X.

That the Court erred in overruling the objection of counsel for plaintiff in error to the following question asked of witness Fitts on cross examination as to whether a photograph shown him did not portray a system of bracing entirely different from that shown by the plaintiff's Exhibit "4", and in permitting said witness to testify over said objection at the trial of said cause.

A. Well, up to here this was practically what we used for the bottom.

Q. Well, look and see if it is.

A. Practically.

Q. Haven't you got a cross piece here in the center?

A. Perhaps. Let's see this.

Q. Don't your braces run across the inside diameter of that surface—of that sewer?

A. Well, the cross piece that you see there is possibly leading you to a misapprehension; in this particular size sewer you see that the band was in two pieces there.

Q. Yes.

A. The band was made in two pieces, but when it was set up it was one; that is probably the bar that you see across there.

Q. But if I am mistaken, what do you see; do you see anything like plaintiff's exhibit 4?

A. Very much like it.

XI.

That the Court erred in sustaining the defendant's motion to strike certain testimony of the plaintiff, and in not permitting said plaintiff to testify, as follows:

Q. Mr. Bassett, this patent having been granted to you in 1911, state whether or not you have let any royalties on it, any royalty contracts under it?

A. No sir, I have not.

Q. Did you or did you not have any applications from any persons negotiating with you to use your patent, this patent?

Q. How soon after the granting of the patent did you ascertain of your own knowledge that the defendant was infringing, as you claim, was using your patented device?

THE COURT: Objection sustained.

MR. COOK: We have cases, Your Honor, that hold in the absence of an established royalty, a reasonable royalty becomes the basis.

MR. SHEPARD: If Your Honor desires authorities to be produced we can show Your Honor that the courts have held that in the absence of an established royalty, owing to the youthfulness of the patent, the patent being granted so recently or

otherwise, the plaintiff may show in an action at law for damages what is a reasonable royalty for the use of it or he may show as bearing upon it, to be submitted to the jury, the profits that may be made or have been made by the defendant out of the use of the patent. We call Your Honor's attention to the fact that this invention was infringed; at least we have procured evidence to show that it was infringed before the patent was granted, after the application was made, and in cases of that kind, it having been impossible to establish any royalty while that application was pending, evidence of the profits and of the general advantage resulting from the use of the patent may be resorted to to enlighten the jury upon the subject of the damages caused to the plaintiff by infringing his device.

Q. Mr. Bassett, you yourself have used this device, have you not?

A. Yes sir.

Q. Will you now, with the permission of the Court, state to the jury what is the amount of saving in lumber or otherwise effected by using this patented device over using the previous unpatented devices?

MR. COOK: Your Honor, the Courts have held, in the absence of an established royalty, general evidence can be resorted to showing the saving that follows the use of these patents over and above any forms that were not patented. Now, we are not going to show the saving over and above forms that

were patented, but over and above forms that were not patented, and open to the public to use.

THE COURT: I appreciate your question, but I say I still don't know what you are comparing it with, nor do I know that this witness is competent to make the comparison.

MR. COOK: The actual saving of the wood that was left in these sewers before forms were constructed and patented by Mr. Bassett, the actual saving in time and material.

The witness further testified, all of which evidence was stricken as to the amount of lumber required in constructing forms for the different size sewers without the patented forms and with the patented forms as to the difference in cost between them; as to how much of the lumber of the unpatented forms was waste; if there was an advantage or gain in economy of labor and material in the use of the patented device; as to what that advantage or gain was. All of which testimony was given for the purpose of establishing a basis for estimating the damages.

MR. SHANK: I move to strike from the record all testimony of this witness with reference to the amount of lumber, the percentages saved and the other testimony relating to the use of this patent, given upon the stand this morning since his having been recalled.

THE COURT: The motion will be granted and the jury instructed to disregard the testimony.

(Exception noted and allowed for plaintiff.)

XII.

That the Court erred in permitting counsel for the defendant in error to persistently ask expert witness George over the objection of counsel for plaintiff in error the following question:

Q. What I want is this: I want you to state whether you can determine and have determined the sustaining powers of this structure with this form of bracing, with that method of molding the concrete?

A. Yes sir.

Q. Now, state how that would act upon that internal structure consisting of that bracing if that form of mold would stand?

A. That system of bracing as shown on this drawing would not stand—is not stable.

XIII.

That the Court erred in overruling objection of counsel for plaintiff in error to the following question asked of expert witness George, in substance as follows:

Q. Can defendant's Exhibit "J" be operated with as great speed as plaintiff's Exhibit "K"?

A. It can be operated with much greater speed and economy than plaintiff's Exhibit "J".

XIV.

That the Court erred in overruling objection of counsel for plaintiff in error to the following question asked of witness Bassett, the patentee, in substance as follows:

Would you say that this volume I hand you was the volume you saw out there at your work?

A. No, I would not say it was; I believe and presume that it was.

XV.

That the Court erred in overruling objection of counsel for plaintiff in error to the following question asked of witness Dahl, in substance as follows:

How many forms or sections would they put in on the Erickson job in a day?

A. Three sections and a half a day.

XVI.

That the Court erred in denying the plaintiff's motion to direct a verdict in favor of the plaintiff made at the close of all of the evidence.

The Court denied the motion; you can have an exception.

(Exception noted for plaintiff.)

XVII.

That the said Court erred in refusing to give to the jury upon the trial of said cause the following instructions requested in writing by plaintiff in error:

“First Instruction. The jury are instructed to return a verdict for the plaintiff with nominal damages of six cents.

XVIII.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instructions requested in writing by plaintiff in error:

“Second Instruction. The issue of letters patent

is of itself presumptive or prima facie evidence that the invention patented is new and useful and the patentee is the first and true inventor. The defendant has not produced any evidence that overthrows this presumption; and the jury are therefore charged to find for the plaintiff on those issues; that is, that the plaintiff was the true and first inventor and the combinations described in the first, fifth and sixth claims were and are new and useful.

XIX.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Third Instruction. There are three questions of fact to be decided by the jury: (1) Whether the plaintiff’s invention was a novel one when he made it; that is, whether the same thing in substance or legal effect had been made, known or used before the plaintiff invented it; (2) Whether the device used by the defendant infringed the plaintiff’s patented device; (3) What damage resulted to the plaintiff if the defendant did infringe the plaintiff’s patent.

XX.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Fourth Instruction. This patent is a combination patent. The question is not whether the different parts or elements of the patented invention are new or old, but whether the total group or com-

bination of parts stated in any one of the claims, 1, 5 and 6 is new or old. The patent law allows a patent to be granted for a new and useful combination of parts, every one of which by itself is old and well known and was used long before the patent.

XXI.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Fifth Instruction. The means used for bracing, either by bars or sticks or by semi-circular or arched pieces, at the ends of the section or between the ends are not claimed as part of the patented combination in any of the claims 1, 5 and 6; and the use or non-use of either method of bracing has nothing to do with the questions of infringement or of novelty.

XXII.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error.

“Sixth Instruction. To constitute an infringement of a combination, there must be a use of the entire combination or group of co-operating parts, constituting the combination, either by using a literal copy of those parts or by substituting for one or more of the parts mechanical equivalents. If mechanical equivalents are used, they accomplish infringement equally as well as if only literal copies or duplicates of those parts are used, provided the total combination accomplishes the same

new and useful result which the patented combined device does.

XXIII.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Seventh Instruction. A mechanical equivalent is something which performs the same function, or produces the same effect as a part of the total combination, and in substantially the same way, as the part for which it is substituted.

XXIV.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Eighth Instruction. If the jury finds that the defendant has used, after the date of granting the patent and after notice from the plaintiff to desist from such use, the combination of parts described in any one of the three claims 1, 5 and 6, or a combination containing some of those parts or elements and other elements which are mechanical equivalents, performing the same function or operation in substantially the same way and to the same effect, and which are substitutes for the rest of the combination covered by anyone of those three claims then the jury should find that the defendant has infringed the patent in suit.

XXV.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following in-

struction requested in writing by plaintiff in error:

“Ninth Instruction. Infringement is caused by using the whole of a patented combination (including mechanical equivalents) even if something else not patented is added or used besides and along with the patented combination, but not by using less than the entire combination. The jury must therefore find (in order to conclude that the defendant has infringed the patent) that the defendant has used the whole of the combination covered by any one of the three claims, 1, 5 and 6;—keeping in mind the court’s instructions as to mechanical equivalents; and if it so finds, and also finds in the plaintiff’s favor as to the novelty of the patent, then its verdict should be for the plaintiff.

XXVI.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Tenth Instruction. If any one claim of those sued on has been used by the defendant, it is equally an infringement of the plaintiff’s patent right as if all three, or even all the seven claims allowed in the plaintiff’s patent were infringed.

XXVII.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Eleventh Instruction. The plaintiff not having shown any royalty contracts or sales of his rights to establish a royalty, he is entitled to show by

general evidence what is a reasonable royalty; and he may show that by evidence of the comparative advantage in economy of time and labor and materials for using his patented device, as compared with any other device open to the public at the same time.

XXVIII.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Twelfth Instruction. If the physical or mechanical difference between the plaintiff’s patented device and the defendant’s device are enough to have secured to the defendant a patent (supposing that he was the first person who invented those differences), then they do not infringe the patent. If on the other hand, they are mere variations which would suggest themselves to any skilled mechanic in that art, then they have not the quality of invention, and are mere colorable evasions, or mechanical equivalents. The test of invention on the one hand is the test of equivalency on the other hand. That which performs the same function in substantially the same way and with substantially the same result is a mechanical equivalent of what it displaces and is not the fruit of invention.

XXIX.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Thirteenth Instruction. If we compare claim 1 of the patent with the drawings and models of the forms used by the defendant, we find in each the skin or lagging against the outer surface of which the inner surface of the concrete sewer is formed, and this skin or lagging with its lengthwise and crosswise ribs makes the segments; we find in each the outer restraining band which holds the segments from separating by moving away from the center of the sewer and also acts as an end wall to the concrete section in each; we find in each the invert, consisting of segments or members which when fastened in place occupy the outline of the invert at the proper distance for filling up the invert with brick; we find that equally in each contrivance there can be a peripheral motion, that is, a motion along the line of the circle, by one or both of the segments next to the invert, into and within the limits of the invert, although apparently there can be much more of that motion in the plaintiff's forms than in the defendant's; we find that in each form the segments are tightened against each other and against the outer band by wedges inserted at the proper places, and we find in each form a cross bar or sill spanning the invert, like the chord of an inverted arch. In the defendant's forms this sill is in the form of a solid arch, filling the entire arch of the invert and affording a rest or support for the upper segments of the circle. In the plaintiff's device, the sill is only a straight bar or beam, with posts extending from its underside to the joints

of the segments in the invert. The only differences in the two devices are the interior bracing by a circle or by radial and other cross braces; the shape of the sill or arc filling the invert, the cutting of the outer band or hoop into two semi-circles in the defendant's form while it is shown in the plaintiff's drawings and model as a single piece, and lastly the precise shape and number of the members of the invert. The bracing is not one of the elements of the first claim, and it is open to any one to adopt any suitable mode of interior bracing. The question for the jury on this claim No. 1 is whether the differences which have just been pointed out are or are not mechanical equivalents—whether the corresponding things do or do not perform the same function or duty; in plain words do the same work, in substantially the same way and with substantially the same result. That is a question of fact which the jury must decide in the light of the testimony of both expert and non-expert witnesses, of the patent specification, drawings and claims of the models and other exhibits and of their own knowledge of mechanics.

XXX.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Fourteenth Instruction. Infringement is not avoided by making in one piece what the plaintiff's patent and drawings, or his actual use of his own in-

vention show as made in two; or by making in two or more pieces what the plaintiff made or drew in one.

XXXI.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Fifteenth Instruction. If a certain part in the defendant’s form does the same work in the same way as the corresponding part in the plaintiff’s—if it is a mechanical equivalent—it does not avoid being an infringing device if it does that work more strongly or perfectly or if it also performs some other function not found in the plaintiff’s device.

XXXII.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Sixteenth Instruction. If any one element of a claim in the plaintiff’s patent is omitted from the defendant’s device then the defendant does not infringe that particular claim; but on the other hand, if the defendant does use all the elements of that claim or their equivalents and adds something else not in the plaintiff’s device, then the defendant does infringe even though the added feature may make the whole contrivance do better or cheaper or faster work.

XXXIII.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Seventeenth Instruction. The bracing shown in the plaintiff’s drawings and model is not an element of any claim in suit in this case; the doctrine of mechanical equivalents does not apply to it; and its use or disuse by either party has no bearing on infringement or any other issue. In view of what every intelligent mechanic must have known about bracing an arc or circle against pressure from outside inward, and of the descriptive matter in the patent specifications, it was open to any one to use any form of bracing. The jury therefore should disregard all the evidence bearing on the bracing used by each party.

XXXIV.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Eighteenth Instruction. A patentee is not confined to any particular form, size, shape or material in embodying or using his invention, unless either he expressly declared he claims only that form, etc., or the invention by its nature confines him to that form, size, shape or material. In neither of these ways is the plaintiff so limited. He expressly says in his specifications that he shows the form ‘which he prefers’. Anyone who uses the same elements,

or substantially the same design infringes equally with one who uses a literal copy of the design.

XXXV.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Nineteenth Instruction. By comparing the models and drawings showing the device used by each party, the jury can test the charge by the plaintiff that his fifth claim infringed. In each it is plain to every one that certain elements—the segments, with their lengthwise and crosswise ribs, and the outer band, also acting as an end wall—are the same. It is for the jury to judge in the light of all these exhibits and also of the testimony of the witnesses, whether the means for expanding or tightening the segments peripherally—that is, along the line of the circle—against the outer band are the same or are mechanical substitutes one for the other. And also whether the defendant has used the interlocking device by which the ends of the segments of one mold join to or lap over the ends of the segments of the adjoining mold. If all the elements of the fifth claim have been used by the defendant either by literally copying them, or by substituting mechanical equivalents, then the defendant has infringed that claim.

XXXVI.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Twentieth Instruction. In the same manner, the jury should compare the plaintiff’s and the defendant’s devices as to the sixth claim of the patent. It is for the jury to decide whether the defendant’s device contains either in the same form or by mechanical equivalents all the elements of the sixth claim. Unquestionably it contains some of them, such as the segments and the outer restraining band with its offset for the invert; and as to those which are not precisely alike, it is the province of the jury to decide whether the corresponding parts in the two devices are mechanical equivalents. If they are such mechanical equivalents, and if by that test all the elements of the plaintiff’s’ claim 6 are found in the defendant’s device, then the sixth claim is infringed and the plaintiff is entitled to your verdict on that claim.

XXXVII.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Twenty-first Instruction. In view of the argument of counsel to the jury, the plaintiff requests the court to charge the jury that the omission by the defense of some one element of a combination covered by one claim sued on, does not avoid infringement of another claim sued on if the defendant uses all the elements in the latter claim. In other words infringement is caused by using the entire combination covered by any one claim in suit,

no matter if the defendant does not use the entire combination covered by some other claim in suit.

The interlocking device is an essential element in the fifth claim and that claim is not infringed unless the defendant uses it even if the defendant uses everything else in that claim. But the first and sixth claims do not contain that element and therefore they may be infringed by the use of all their elements without the interlocking device.

XXXVIII.

That the Court erred in giving the following instruction upon the trial of said cause during the course of his charge to the jury:

“There is a clear distinction between a pioneer invention and an invention merely of improvements by a combination of mechanical devices. A patentee who is the original inventor of a device—a pioneer in the art—is entitled to a broad and liberal construction of his claims; but an inventor who only claims to be an improver is only entitled to what he claims and nothing more. In other words, the original inventor of a device has the right to treat as infringers all who make or use devices operating on the same principle, and performing the same functions by analogous means or equivalent combinations.” And particularly to that passage of it which says: “But if the invention claimed be itself but an improvement on a known device, by a mere change of form or combination of parts, the patentee cannot treat another as an infringer who has improved the original device by use of a dif-

ferent form or combination performing the same functions. The inventor of the first improvement cannot invoke the doctrine of equivalents to suppress all other improvements which are not mere colorable invasions of the first.

XXXIX.

That the said Court erred in giving the following instruction upon the trial of said cause during the course of his charge to the jury:

“If on the other hand you should find from the evidence that the patented device of the plaintiff was not a pioneer device, but that it consisted merely of an improvement or improvements upon prior devices, and that all of the elements contained in the plaintiff’s device were old elements, and that the claim of the plaintiff consisted merely of a combination of old elements, in such case the plaintiff would be limited to the precise device and combination shown and claimed in his patent and in that case if you find that the device made and used by the defendant, was not the precise device or combination shown and claimed by the plaintiff in his patent, you are instructed in such case that the defendant’s device would not infringe the plaintiff’s device even though the defendant’s device operated on the same principle and performed the same functions by analogous means or equivalent combinations. In this connection you are entitled to consider the admission of the plaintiff repeatedly made during the trial that all of the elements contained in his patent are old, his claim being that the only

new feature therein is the combination of the old elements.

XL.

That the said Court erred in giving the following instructions upon the trial of said cause during the course of his charge to the jury:

“The defendant was not permitted to introduce testimony in support of these allegations, (referring to printed publications), and you are instructed that there is no evidence in this cause that the patented device in question, or material or substantial parts thereof, had been in public use and on sale in this country prior to said invention and for more than two years before plaintiff’s application for letters patent, or that the same had been described and illustrated in printed publications prior to the date quoted for the supposed invention of the plaintiff, unless you find the same to have been described in exhibit “N” being Reid on Concrete and Reinforced Concrete Construction, which publication the Court admitted under the testimony of the plaintiff, to the effect that he had had such publication in his possession prior to making his application for a patent. His testimony to this effect was somewhat indefinite and if you should find that he did have such publication in his possession prior to his application for a patent, you will wholly disregard the same.

XLI.

That the said Court erred in giving the following additional instruction upon the trial of said cause during the course of his charge to the jury.

Gentlemen of the Jury: You have requested an additional instruction in this case and I have sent for the reporter and had the attorneys for the respective parties present before giving the instruction. Your request was submitted in writing and reads as follows: "Will a duplication of one individual element be an infringement or, would it require a duplication of all elements, to constitute an infringement?"

It has been admitted by the plaintiff in this case that his patent is not for an individual element or elements claimed to be new, but consists of a new combination of old elements. This combination is set forth in the respective claims of the patent, and I think that for the purposes of your inquiry each claim would be considered separately by itself, but in so considering it before you could find that that particular claim or any particular claim had been infringed, that is in the event that you find this was not a pioneer patent, as you were more fully instructed in the original instructions, if you should find that this was not a pioneer patent, then as you take up each claim of the patent, No. 1, 5 and 6, before you can find an infringement upon any one of those claims you must find that the defendant has used all the elements therein exactly the same way to produce the same result; if you find that

that is not the case, then there has been no infringement upon that claim, in the event you should find it not to be a pioneer invention; if you should find it to be a pioneer invention, then the use of equivalents to produce the same result would constitute infringement.

XLII.

That the Court erred in overruling motion of counsel for plaintiff in error, to set aside the verdict of the jury herein, and to grant to the plaintiff in error a new trial upon the following grounds of error committed at the trial:

1. Error of the Court in excluding evidence offered in behalf of the plaintiff.
2. Error of the Court in admitting evidence offered in behalf of the defendant and objected to by the plaintiff.
3. Error of the Court in charging the jury in passages of the Court's charge excepted to by the plaintiff after the charge and before the verdict was rendered.
4. Error of the Court in refusing to give to the jury, as part of its charge, certain instructions requested by the plaintiff and pertinent to the issues in the case and to the evidence submitted to the jury.
5. Error of the jury in that the verdict was against the weight of evidence.

6. Error of the court in denying plaintiff's motion to direct the jury to find a verdict for the plaintiff.

7. That the verdict was contrary to the law and the evidence, and there was no evidence to support the verdict.

8. Error of the Court in refusing to submit to the jury the question of the plaintiff's right to substantial damages under the evidence submitted by the plaintiff on the subject of damages and afterwards stricken from the minutes by order of the Court.

This motion is made upon all the files and records of the Court and upon the minutes of evidence and exhibits at the trial.

Whereupon plaintiff in error prays that judgment of said Court be reversed and that for such other and further relief as to this Court may seem just and proper.

RICHARD J. COOK,

Attorney for Plaintiff in Error.

Service of Assignment of Errors acknowledged this 1st day of July, 1913. Corwin D. Shank, H. C. Belt, Attorneys for Defendant.

(Endorsed:) Filed in the U. S. District Court, Western District of Washington, July 1st, 1913. Frank L. Crosby, Clerk. Ed M. Lakin, Deputy.

*In the District Court of the United States for the
Western District of Washington.*

No. 2059.

HENRY W. BASSETT,

Plaintiff,

vs.

THE ERICKSON CONSTRUCTION CO.,
a Corporation,

Defendant.

VERDICT.

We, the jury in the above entitled cause, find
for the Defendant.

B. L. BARNES, Foreman.

Filed in the U. S. District Court, Western District
of Washington, Jan. 23, 1913. Frank L. Crosby,
Clerk. E. M. L., Deputy.

*In the District Court of the United States for the
Western District of Washington, Northern
Division.*

No. 2059.

HENRY W. BASSETT,

Plaintiff,

vs.

ERICKSON CONSTRUCTION COMPANY,
Defendant.

MOTION FOR NEW TRIAL.

Now comes the plaintiff by Fred W. Dricken and
Richard J. Cook, his attorneys, and moves the Court

to set aside the verdict of the jury herein, and to grant to the plaintiff a new trial upon the following grounds of error committed at the trial.

I.

Error of the Court in excluding evidence offered in behalf of the plaintiff.

II.

Error of the Court in admitting evidence offered in behalf of the defendant and objected to by the plaintiff.

III.

Error of the Court in charging the jury in passages of the Court's charge excepted to by the plaintiff after the charge and before the verdict was rendered.

IV.

Error of the Court in refusing to give to the jury, as parts of its charge, certain instructions requested by the plaintiff and pertinent to the issues in the case and to the evidence submitted to the jury.

V.

Error of the jury in that the verdict was against the weight of evidence.

VI.

Error of the Court in denying plaintiff's motion to direct the jury to find a verdict for the plaintiff.

VII.

That the verdict was contrary to the law and the evidence, and there was no evidence to support the verdict.

VIII.

Error of the Court in refusing to submit to the jury the question of the plaintiff's right to substantial damages under the evidence submitted by the plaintiff on the subject of damages and afterwards stricken from the Minutes by order of the court.

This motion is made upon all the files and records of the court and upon the minutes of evidence and exhibits at the trial.

Dated at Seattle, Washington, this 24th day of January, 1913.

RICHARD J. COOK,

FRED W. DRICKEN,

Plaintiff's Attorneys.

Service admitted Jan. 24, 1913. Shank & Smith, Attys. for Deft.

(Endorsed:) Filed in U. S. District Court, Western District of Washington, Jan. 24, 1913. Frank L. Crosby, Clerk. E. W. L., Deputy.

*In the District Court of the United States for the
Western District of Washington, Northern
Division.*

No. 2059.

HENRY W. BASSETT,

Plaintiff,

vs.

ERICKSON CONSTRUCTION COMPANY,

Defendant.

ORDER OVERRULING MOTION FOR NEW
TRIAL.

This cause coming regularly on for hearing before the Court on February 24, 1913, upon the plaintiff's motion for a new trial, and after argument by counsel for the respective parties hereto, and the court being fully informed in the premises, it is now here

Ordered and adjudged that said motion be and the same is hereby denied.

Plaintiff is allowed an exception to the ruling of the Court.

Done in open court this February 26, 1913.

By the Court,

CLINTON W. HOWARD,

Judge.

*In the District Court of the United States for the
Western District of Washington, Northern
Division.*

No. 2059.

HENRY W. BASSETT,

Plaintiff,

vs.

ERICKSON CONSTRUCTION COMPANY,

Defendant.

JUDGMENT.

This cause having come on regularly for trial before a jury, the plaintiff appearing in person and the defendant represented by its proper officers, both parties being represented by counsel, and after the introduction of evidence on behalf of the plaintiff and the defendant, and the arguments of counsel, the Court instructed the jury upon the matters of law controlling herein and submitted to the said jury all of the issues framed by the pleadings herein, including the question as to whether the plaintiff had a patentable invention as the same was described and set forth in his letters patent, or as to whether in the event the plaintiff had a patentable invention the defendants had infringed upon the rights of the plaintiff, and after deliberation by said jury, a verdict was returned in favor of the defendant,

Now therefore it is hereby ordered, adjudged and decreed that in conformity to said verdict, the plain-

tiff take nothing by this action and that the defendant have and recover of the plaintiff its costs and disbursements herein.

Done in open court this February 26, 1913.

CLINTON W. HOWARD,

Judge.

(Endorsed:) Filed in the U. S. District Court, Western District of Washington, Feb. 26, 1913. Frank L. Crosby, Clerk. E. M. Lakin, Deputy.

*In the District Court of the United States for the
Western District of Washington, Northern
Division.*

No. 2059.

HENRY W. BASSETT,

Plaintiff,

vs.

ERICKSON CONSTRUCTION COMPANY,

Defendant.

ORDER EXTENDING TIME FOR PLAINTIFF
TO SERVE AND FILE BILL OF
EXCEPTIONS.

On the application of the plaintiff's counsel and on due consideration thereof,

It is ORDERED that the plaintiff is granted an extension of time for sixty days after the date

hereof in which to serve and file his proposed Bill of Exceptions herein for the purpose of review of the judgment by Writ of Error.

DATED March 3, 1913.

By the court.

CLINTON W. HOWARD,

District Judge.

(Endorsed): Filed in the U. S. District Court, Western District of Washington, May 3, 1913.
Frank L. Crosby, Clerk. E. M. Lakin, Deputy.

*In the District Court of the United States, Western
District of Washington, Northern Division.*

No. 2059.

HENRY W. BASSETT,

Plaintiff,

vs.

THE ERICKSON CONSTRUCTION COM-
PANY, a corporation,

Defendant.

AFFIDAVIT.

*The United States of America, Western District of
Washington, Northern Division, County of
King, State of Washington.—ss.*

HENRY W. BASSETT, being duly sworn, says:
That he is the plaintiff in the above entitled cause;
that he left for the City of San Francisco directly

after the trial and before entry of final judgment, where he has been engaged in construction work.

Affiant says that while in attendance at the above trial, storms seriously damaged the equipment used in building of the pier he was engaged in constructing in San Francisco Bay, involving delay and serious financial loss; that since his return he has been steadily engaged in the restoration of said work and consequently has been unable to consult with his attorneys in regard to the appeal of this case. Affiant says that he has received letters urging consideration of this matter, and that this is the first opportunity he has had to discuss the feasibility of appeal with his attorneys and others interested.

Affiant further states that he has given serious consideration, and firmly believes he has good and excellent grounds to appeal this case and restore his rights by virtue of his patent, and that he has been so advised by his attorneys and other attorneys with whom he has been in consultation.

Affiant says that this motion is not made for delay; that he fully intends to appeal this case and to that extent has authorized and advanced money to the stenographers to prepare a transcript of the record, which cannot be delivered under a month, as he has been so advised.

Affiant further says that he is very anxious to have a judicial determination of this case by the United States Court of Appeals, as other litigation is now pending before this Court, for infringement

of his patent, and a refusal to grant this continuance to perfect his grounds for appeal will result in very serious harm and disadvantage to him.

HENRY W. BASSETT.

Subscribed and sworn to before me this 18th day of April, A. D. 1913.

E. B. PALMER,

Notary Public in and for the State of
Washington, residing at Seattle therein.

(Endorsed:) Filed in the U. S. District Court,
Western District of Washington, April 18, 1913.
Frank L. Crosby, Clerk. E. M. Lakin, Deputy.

Service of affidavit acknowledged 18th day of
April, 1913.

CORWIN S. SHANK,

Atty. for Defendant.

*In the United States District Court, Western Dis-
trict of Washington, Northern Division.*

No. 2059.

HENRY W. BASSETT,

Plaintiff,

vs.

ERICKSON CONSTRUCTION COMPANY,

Defendant.

ORDER.

This cause came on for hearing this day upon
the affidavit and motion of the plaintiff for an
extension of the time within which to file and serve

the proposed bill of exceptions at the trial hereof, and the parties appeared by their respective counsel; and upon consideration of the affidavit and of the statements of counsel;

Now on motion of the plaintiff's attorneys, it is ORDERED that the time for serving and filing the proposed bill of exceptions by the plaintiff is hereby extended for 60 days after the 2d day of May, 1913, to which date the time had previously been extended by order of this court.

Dated at Seattle, Washington, April 21, 1913.

By the Court.

EDWARD E. CUSHMAN,

District Judge.

(Endorsed:) Filed in the U. S. District Court,
Western District of Washington, April 21, 1913.
Frank L. Crosby, Clerk. E. M. Lakin, Deputy.

*In the District Court of the United States Western
District of Washington Northern Division*

No. 2059.

HENRY W. BASSETT,

Plaintiff,

vs.

THE ERICKSON CONSTRUCTION COM-
PANY, a corporation,

Defendant.

ORDER SETTLING AND CERTIFYING BILL OF EXCEPTIONS.

The matter of settling and certifying the foregoing Bill of Exceptions came on regularly to be heard this 4th day of August, 1913, and it appearing to the Court that a verdict was rendered in this cause on the 23rd day of January, 1913, and that a motion for a new trial was duly made and heard and that the same was overruled and that final judgment was entered therein on the 26th day of February, 1913, and it appearing that the Court did on the 3rd day of March, 1913, extend the time sixty days from the date thereof for filing proposed Bill of Exceptions, and it appearing that the Court did on the 21st day of April, 1913, further extend the time sixty days from the date thereof for filing the proposed Bill of Exceptions and it appearing that by agreement of the parties an extension of thirty days was granted defendant for filing proposed amendment to plaintiff's proposed Bill of Exceptions, and it further appearing to this Court that the Hon. C. W. Howard who presided at the trial and passed upon the motion for a new trial therein had ceased to be judge of this court before the Bill of Exceptions herein could be settled, and it further appearing that the plaintiff has caused to be prepared from the notes taken by the Court's stenographer who was present and in attendance upon said trial a full, true and correct transcript of all the evidence, testimony and proceedings of said

trial, which transcript the parties hereto agree is a full, true and correct transcript of all the evidence introduced at and all proceedings had at the trial herein and which said transcript the Court has now before it, and the contents of which it is fully advised; the plaintiff and defendant now appearing by their respective attorneys of record herein;

Now therefore, it is by the undersigned Judge of this Court Ordered and Certified that the first, second, third, fourth, fifth, sixth, seventh, ninth, tenth and eleventh amendments proposed by the defendant be allowed by mutual consent and that the eighth amendment proposed by the defendant be and the same is hereby disallowed and rejected, and it is by the Court Ordered that the Bill of Exceptions as corrected and amended by interlineation be settled and allowed and made a part of the record herein and the same being so settled and certified it is hereby Ordered to be filed by the Clerk.

JEREMIAH NETERER,

Judge.

(Endorsed): Filed in the U. S. District Court. Western District of Washington, Aug. 9, 1913. Frank L. Crosby, Clerk. Ed. M. Lakin, Deputy.

Service of within Order and receipt of copy admitted this 9th day of Aug., 1913.

CORWIN S. SHANK,

and

H. C. BELT,

Attorneys for Defendant.

*In the District Court of the United States Western
District of Washington Northern Division.*

No. 2059.

HENRY W. BASSETT,

Plaintiff,

vs.

THE ERICKSON CONSTRUCTION COM-
PANY, a corporation,

Defendant.

MOTION FOR ORDER ALLOWING WRIT
OF ERROR AND FIXING COST BOND.

Now comes the plaintiff and upon the Petition for Order allowing Writ of Error filed herein July 29, 1913, and on the files and records herein, moves the Court for an order granting same on behalf of plaintiff and for a further order fixing plaintiff's cost bond and settling the amount of plaintiff's costs allowed by Judge C. H. Hanford as terms imposed upon defendant for a continuance heretofore allowed defendant upon defendant's motion and request all of which is based upon the records and files herein and for a further order settling defendant's costs herein.

REED & COOK,

Attorneys for Plaintiff.

*In the District Court of the United States Western
District of Washington Northern Division.*

No. 2059.

HENRY W. BASSETT,

Plaintiff,

vs.

THE ERICKSON CONSTRUCTION COM-
PANY, a corporation.

Defendant.

PETITION FOR ORDER ALLOWING

WRIT OF ERROR.

To the Honorable Judge of the District Court
aforesaid:

Now comes Henry W. Bassett, plaintiff in the
above entitled action, by his attorneys, and respect-
fully shows that on the 23rd day of January, 1913,
a jury duly empaneled in the above entitled court
found a verdict against said Henry W. Bassett and
in favor of The Erickson Construction Company,
defendant herein, and upon said verdict a final
judgment was entered on the 26th day of February,
1913, and for defendant's costs and disbursements
therein against Henry W. Bassett.

Your petitioner, Henry W. Bassett, feeling him-
self aggrieved by said verdict and judgment entered
thereon, in which judgment and verdict and the pro-
ceedings leading up to the same certain errors were
committed to the prejudice of the said plaintiff,

which more fully appear from the assignment of errors which has heretofore been filed, comes now and prays said court for an order allowing the said plaintiff to prosecute a writ of error to the Honorable United States Circuit Court of Appeals for the Ninth Circuit for the correction of the errors complained of, under and according to the laws of the United States in that behalf made and provided; and that a writ of error do issue, that an appeal in this behalf to said United States Circuit Court of Appeals aforesaid sitting at San Francisco California in said circuit for the correction of the errors complained of and herewith assigned, be allowed; and also prays that an order be made fixing the amount of security, and the cost bond, which the said plaintiff shall give upon said writ of error, and that upon the furnishing the said security and cost bond all further proceedings in this cause be suspended and stayed until determination of said writ of error by said Circuit Court of Appeals for the Ninth Circuit and the plaintiff further prays that a transcript of the record proceedings, papers and models in this cause duly authenticated may be sent to the said Circuit Court of Appeals, and your petitioner will ever pray.

Dated the 29th day of July, 1913.

REED & COOK,
Attorneys for Plaintiff.

(Endorsed:) Filed in U. S. District Court, Western District of Washington, July 29, 1913. Frank L. Crosby, Clerk. E. M. Lakin, Deputy.

Service of within Petition for and allowing Writ of Error 29 day of July, 1913.

CORWIN S. SHANK,
and
H. C. BELT,
Attorneys for Defendant.

*In the District Court of the United States Western
District of Washington Northern Division.*

No. 2059.

HENRY W. BASSETT,

Plaintiff,

vs.

THE ERICKSON CONSTRUCTION COM-
PANY, a corporation,

Defendant.

ORDER SETTTLING COSTS.

The motion of the plaintiff for an order settling costs herein having come on for hearing upon the 13th day of August, 1913, plaintiff and defendant being represented by counsel, and it appearing to the court that judgment herein was entered and no cost taxed to plaintiff pursuant to order of court in

granting final continuance, and that the defendant failing to file its cost bill within the time required by rule,

IT IS HEREBY ORDERED that the clerk shall retax costs against the plaintiff and in favor of the defendant such clerk's fees as are taxable under the rules.

DONE in open court this August 13th, 1913.

BY THE COURT.

JEREMIAH NETERER,

Judge.

(Endorsed): Filed in the U. S. District Court,
Western District of Washington, Aug. 14, 1913.
Frank L. Crosby, Clerk. E. M. Lakin, Deputy.

CORWIN S. SHANK,

H. C. BELT,

Attorneys for Defendant.

*In the District Court of the United States Western
District of Washington Northern Division.*

HENRY W. BASSETT,

Plaintiff,

vs.

THE ERICKSON CONSTRUCTION COM-
PANY,

Defendant.

ORDER GRANTING WRIT OF ERROR AND
FIXING AMOUNT OF BOND.

This cause coming on to be heard in the court room of said court in the city of Seattle, Washington, upon the petition of plaintiff, Henry W. Bassett, herein filed praying the allowance of a writ of error to the United States Circuit Court of Appeals for the Ninth Circuit, together with the assignment errors also heretofore filed, in due time, and also praying that a transcript of the record and proceedings, papers and models, upon which the judgment herein was rendered, duly authenticated, may be sent to the United States Circuit Court of Appeals for the Ninth Circuit, and that such other and further proceedings may be had as may be proper in the premises.

The Court having duly considered the same does hereby allow the said writ of error prayed for, and it is Ordered that upon the giving by the plaintiff, Henry W. Bassett, of a bond according to law, in the sum of Two thousand Dollars, the same shall operate as a stay to all proceedings pending the determination of said writ of error.

Dated this 4th day of August, 1913.

JEREMIAH NETERER,
Judge.

(Endorsed): Filed in the U. S. District Court, Western District of Washington, Aug. 4th, 1913.
Frank L. Crosby, Clerk. E. M. Lakin, Deputy.

*In the District Court of the United States for the
Western District of Washington, Northern
Division.*

No. 2059.

HENRY W. BASSETT,

Plaintiff,

vs.

THE ERICKSON CONSTRUCTION COM-
PANY, a corporation,

Defendant.

COST BOND ON APPEAL.

KNOW ALL MEN BY THESE PRESENTS:
That we, Henry W. Bassett, plaintiff in the above
entitled action, as principal, and the MARYLAND
CASUALTY COMPANY, a corporation organized
under the laws of the State of Maryland and au-
thorized to transact the business of surety in the
State of Washington, as Surety, are held and firmly
bound unto The Erickson Construction Company,
a corporation, defendant in the above entitled ac-
tion, in the sum of Two Thousand Dollars, to be
paid to said defendant, its successors and assigns,
for which payment well and truly to be made we
bind ourselves, our heirs, executors, administrators
and successors, jointly and severally, firmly by these
presents.

Sealed with our seals and dated this 21st day of
August, 1913.

The condition of the above obligation is such that

Whereas, in the above court and cause final judgment was rendered against the plaintiff Henry W. Bassett and in favor of the defendant, The Erickson Construction Company, a corporation, for its costs and disbursements incurred and expended amounting to the sum of \$14.30; and

Whereas the said plaintiff has obtained from the said court a writ of error and filed a copy thereof in the Clerk's Office of said court to reverse the judgment of said court in said action, and a citation directed to the said The Erickson Construction Company, a corporation, defendant, has been issued citing him to appear before the United States Circuit Court of Appeals for the Ninth Circuit to be holden at San Francisco in the State of California;

NOW, THEREFORE, if the said plaintiff, Henry W. Bassett, shall prosecute the said writ of error to effect and shall answer all costs if he fail to make his plea good, then the above obligation shall be void, otherwise to remain in full force and effect.

HENRY W. BASSETT

MARYLAND CASUALTY COMPANY

(Seal)

By WM. M. CALHOUN, Agent

Attest: NELSON R. ANDERSON

Attorney in Fact.

The above and foregoing bond, and the sufficiency of the surety thereon is hereby approved by me this 21 day of August, 1913.

JEREMIAH NETERER,
Judge of the District Court of the United
States for the Western District of
Washington.

Copy of the within bond received and due service
of same acknowledged this 21 day of August, 1913.

CORWIN S. SHANK

HORATIO C. BELT

Attorneys for Defendant.

(Endorsed): Filed in the U. S. District Court,
Western District of Washington, Aug. 5, 1913.
Frank L. Crosby, Clerk. E. M. Lakin, Deputy.

*United States Circuit Court of Appeals for the
Ninth Judicial Circuit.*

HENRY W. BASSETT,

Plaintiff,

vs.

THE ERICKSON CONSTRUCTION COM-
PANY, a corporation,

Defendant.

WRIT OF ERROR.

United States of America—ss.

The President of the United States of America to
the Judges of the District Court of the United
States for the Western District of Washington,
Northern Division, Greeting:

Because in the record and proceedings, as also in the rendition of the judgment of the plea which is the said District Court before you, or some of you, between Henry W. Bassett, plaintiff, and The Erickson Construction Company, a corporation, defendant, a manifest error hath happened, to the great damage of the said Henry W. Bassett, plaintiff, as is said and appears by the complaint, we being willing that such error, if any hath been, should be duly corrected and full and speedy justice done to the party aforesaid, in this behalf, do command you, if any judgment be therein given, that then, under your seal, distinctly and openly, you send the record and proceedings aforesaid, with all things concerning the same, to the Justice of the United States Circuit Court of Appeals for the Ninth Circuit, at the courtrooms of said court in the city of San Francisco, in the State of California, together with this writ, so that you have the same at the said place before the justice aforesaid, within thirty (30) days from the date of this Writ, that the record and proceedings aforesaid being inspected, the said justice of the said Circuit Court of Appeals may cause further to be done therein to correct that error, what of right and according to the law and custom of the United States ought to be done.

Witness, the Honorable Edward D. White, Chief Justice of the Supreme Court of the United States, this 4 day of August, in the year of our Lord one thousand nine hundred and thirteen, and of the Independence of the United States the one hundred and thirty-seventh.

FRANK L. CROSBY,

Clerk of said District Court of the United
Seal States, for the Western District of
Washington.

The foregoing writ is hereby allowed this 4th day of August, 1913.

JEREMIAH NETERER,

United States District Judge for the
Western District of Washington.

Copy of the within Writ of Error received, and due service of same acknowledged this 4th day of August, 1913.

CORWIN S. SHANK

Attorney for Defendant.

(Endorsed): Filed in the U. S. District Court, Western District of Washington, Aug. 4th, 1913.
Frank L. Crosby, Clerk. Ed. M. Lakin, Deputy.

*United States Circuit Court of Appeals for the
Ninth Judicial Circuit.*

HENRY W. BASSETT,

Plaintiff,

vs.

THE ERICKSON CONSTRUCTION COM-
PANY, a corporation,

Defendant.

No. 2059.

CITATION.

The United States of America—ss.

The President of the United States, to The Erickson Construction Company, a corporation, and to Corwin S. Shank and Horation C. Belt, its attorneys, Greeting:

You are hereby cited and admonished to be and appear at the United States Circuit Court of Appeals for the Ninth Circuit, to be held at the City of San Francisco in the State of California within thirty (30) days from the date of this Writ pursuant to the terms of a Writ of Error filed in the Clerk's Office of the District Court of the United States for the Western District of Washington, Northern Division wherein Henry W. Bassett, is plaintiff, and The Erickson Construction Company, a corporation, is defendant; to show cause, if any there be, why the judgment in said Writ of Error mentioned should not be corrected and speedy jus-

tice should not be done to the parties in that behalf.

Witness the Honorable Edward D. White, Chief Justice of the Supreme Court of the United States of America this 4th day of August, A. D. one thousand nine hundred and thirteen and of the Independence of the United States, one hundred and thirty seven.

Dated this 4th day of August, 1913.

JEREMIAH NETERER,

United States District Judge presiding in
the United States District Court for
the Western District of Washington,
Northern Division.

Attest: FRANK L. CROSBY,

Clerk of the United States District Court
for the Western District of Washing-
(Seal) ton.

I hereby acknowledge due and regular service of the foregoing Citation in the City of Seattle this 5th day of August, 1913.

CORWIN S. SHANK,

Attorney for The Erickson Construction
Company, a corporation.

(Endorsed): Filed in the U. S. District Court,
Western District of Washington, Aug. 5, 1913.
Frank L. Crosby, Clerk. E. M. Lakin, Deputy.

*United States Circuit Court of Appeals for the
Ninth Circuit.*

HENRY W. BASSETT,

Plaintiff,

vs.

THE ERICKSON CONSTRUCTION COM-
PANY, a corporation,

Defendant.

ORDER OF ENLARGEMENT OF THE TIME
OF CITATION.

The United States of America—ss.

The President of the United States, to The Erickson
Construction Company, a corporation, and to
Corwin S. Shank and Horatio C. Belt, its at-
torneys, Greeting:

On motion of the plaintiff, and from the affidavit
of Richard J. Cook filed herein, and stipulation be-
tween parties and it appearing to the Court, that
good cause exists for the enlarging of the time of
the citation herein dated the 4th day of August,
1913, issued in the above entitled cause;

It is hereby Ordered and Adjudged that the time
within which the defendant is cited and admonished
to be and appear at the United States Circuit Court
of Appeals for the Ninth Circuit, to be held at the
City of San Francisco in the State of California
pursuant to the terms of a Writ of Error filed in
the Clerk's Office of the District Court of the United

States for the Western District of Washington, Northern Division be and the same is hereby extended and enlarged for a further and additional time and period of (30) thirty days.

Witness the Honorable Edward D. White, Chief Justice of the Supreme Court of the United States of America this ~~30~~³¹ day of ~~September~~^{August}, A. D. one thousand nine hundred and thirteen and of the Independence of the United States, one hundred and thirty seven.

Dated this 30 day of August, 1913.

JEREMIAH NETERER,

United States District Judge presiding
in the United States District Court for
the Western District of Washington,
Northern Division.

Attest: FRANK L. CROSBY,

Clerk of the United States District Court
(*seal*) for the Western District of Wash-
ton.

I hereby acknowledge due and regular service of the foregoing Order of Enlargement of the Time of Citation in the City of Seattle this 30 day of August, 1913.

CORWIN S. SHANK,

Attorney for the Erickson Construction
Company, a corporation.

At a stated Term, to-wit: the October Term A. D. 1912, of the United States Circuit Court of Appeals for the Ninth Circuit, held in the Court-Room thereof in the City and County of San Francisco, in the State of California, on Monday, the twenty-fifth day of August, in the year of our Lord One Thousand, Nine Hundred and Thirteen:

Present: The Honorable WILLIAM W. MORROW, Circuit Judge, Honorable WILLIAM C. VAN FLEET, District Judge, Honorable MAURICE T. DOOLING, District Judge.

No. (Undocketed)

HENRY W. BASSETT,

Plaintiff in Error,

vs.

THE ERICKSON CONSTRUCTION COMPANY, a Corporation,

Defendant in Error.

ORDER WAIVING PRINTING OF CERTAIN
ORIGINAL EXHIBITS AND DIRECTING
CERTIFICATION AND TRANSMIS-
SION THEROF TO THIS
COURT.

On consideration of the Motion of Messrs. Reed & Cook, counsel for the plaintiff in error, for an order waiving the printing of certain original ex-

hibits as a part of the certified Transcript of the Record etc. on return to the writ of error from this Court to the Court below in the above-entitled cause, and on consideration of the affidavit of Mr. Richard J. Cook, filed in support of said motion, and it appearing to the Court that no papers in opposition to the granting of the motion have been filed, and that counsel for the defendant in error have not appeared in open Court in opposition thereto, and good cause therefor appearing:

It is hereby ORDERED that the following-marked original exhibits, viz.:

PLAINTIFF'S EXHIBITS:

Exhibit 4—Plaintiff's model.

Exhibit 5—Certified copy from patent office showing when application was filed.

Exhibit 6—Model (defendant's).

Exhibit 8—Contract made by the city of Seattle with the defendant company for construction work.

Exhibits 9 to 23 inclusive, each respectively represents the monthly and final estimates of the lineal feet of sewer constructed by the defendant company.

DEFENDANT'S EXHIBITS.

Exhibits A, B, C, D, E and F—Copies of patents.

Exhibit G—Blue Print.

Exhibit H—Photograph.

Exhibit I—Drawing of blue print.

Exhibit J—Model of patent.

Exhibit K—Model.

~~Exhibit L—Wrapper, file and contents of patent application.~~

Exhibit N—Book.

Exhibits O and P—Photographs.

Exhibit Q—Model.

Exhibit R—Forms.

Exhibits S, T, U, V, W, X, Y, and Z—Copies of patents.

need not be printed as a part of the said certified Transcript of the Record etc., but that said original exhibits may be separately certified as a part of said certified Transcript of the record etc., and may be transmitted to this Court therewith, by the clerk of the Court below, and the said clerk is hereby ordered and directed to certify and transmit the said original exhibits to this Court accordingly, and at the cost of the plaintiff in error.

I hereby certify that the foregoing is a full, true and correct copy of an original Order made and entered in the within-entitled cause.

Attest my hand the Seal of the said the United States Circuit Court of Appeals for the Ninth Circuit, at the City of San Francisco, in the State of California, this twenty-fifth day of August, A. D. 1913.

(Seal)

F. D. MONCKTON,

Clerk of the United States Circuit Court
of Appeals for the Ninth Circuit.

*Office of the Clerk, U. S. Circuit Court of Appeals,
San Francisco, Frank D. Monckton, Clerk.*

September 5, 1913.

Messrs. Reed & Cook, Attorneys at Law, 615 Lyon
Building, Seattle, Washington.

Dears Sirs: I beg to acknowledge receipt of your favor dated the 2d instant, enclosing stipulation and order waiving printing of certain original exhibits and directing certification and transmission thereof to this Court, of plaintiff's exhibit 7, file, wrapper and contents of plaintiff's application for patent in cause entitled, Henry W. Bassett, plaintiff in error, vs. Erickson Contruction Company, a Corporation, defendant in error.

The stipulation and order referred to were this day presented to our resident Circuit Judge, Honorable William W. Morrow, and the order was signed by him. The stipulation and order were this day filed, and will be re-filed upon the docketing of the case here.

Very truly yours,

F. D. MONCKTON,

Clerk.

*In the United States District Court for the Western
District of Washington, Northern Division.*

No. 2059

HENRY W. BASSETT,

Plaintiff in Error,

vs.

THE ERICKSON CONSTRUCTION COM-
PANY, a corporation,

Defendant in Error.

CERTIFICATE OF THE CLERK UNITED
STATES DISTRICT COURT OF THE
TRANSCRIPT OF RECORD, ETC.

United States of America

Western District of Washington: SS

I, Frank L. Crosby, Clerk of the United States District Court for the Western District of Washington do hereby certify that the foregoing printed pages numbered from 1 to 410 inclusive, are a full, true, correct and complete copy of so much of the record, papers and other proceedings in the above entitled action as are according to the stipulation of the parties hereto, required and are necessary for the hearing of said cause on Writ of Error in the United States Circuit Court of Appeals for the Ninth Circuit, as the originals thereof appear

on file in said Court at the City of Seattle in said District. That the same together with the original plaintiff's exhibits numbered 4 to 23 inclusive and defendant's original exhibits numbered A to Z inclusive, which are transmitted herewith pursuant to order of the United States Circuit Court of Appeals constitute the record on return to Writ of Error herein from the judgment of the United States District Court, Western District of Washington to the United States Circuit Court of Appeals for the Ninth Circuit.

I further certify that I hereto attach and transmit herewith the original Writ of Error and original Citation issued in said cause together with the original Order extending time herein.

I further certify that the cost of certifying the whole thereof is the sum of \$ 8.⁰⁰ which sum has been paid to me by Messrs. Reed & Cook, Attorneys for Henry W. Bassett, plaintiff in error herein.

IN WITNESS WHEREOF I have hereunto set my hand and affixed the seal of said District Court at Seattle in said District the 12th day of ^{Oct} September, 1913.

Frank L. Crosby

Frank L. Crosby,
Clerk of the United States District Court for the
Western District of Washington.

By F. M. Harshberger,
Deputy.

(Seal of U. S. District Court)

United States
Circuit Court of Appeals
For the Ninth Circuit

HENRY W. BASSETT,

Plaintiff in Error,

vs.

THE ERICKSON CONSTRUCTION COM-
PANY, a Corporation,

Defendant in Error.

WRIT OF ERROR FROM THE UNITED
STATES DISTRICT COURT OF THE
WESTERN DISTRICT OF WASHINGTON,
NORTHERN DIVISION.

HON. CLINTON W. HOWARD, Judge.

STATEMENT OF THE CASE.

Henry W. Bassett, the plaintiff on the 24th day of November, 1911, commenced this action in the Western Division of the United States District

Court, Northern Division, State of Washington to recover from the Erickson Construction Company, a corporation, \$30,000 alleged to be due him as damages for the infringement of his patent No. 990, 417 for Forms of Moulded Conduits.

PLEADINGS.

The complaint alleges plaintiff's residence and the residence of the defendant; that prior to the 18th day of March 1910 the plaintiff was the true, original and first inventor of certain new and useful improvements in Forms for Moulded Conduits and sets forth the allegations of his oath incident to the filing of his application for a patent.

That plaintiff filed his application for a patent on the 18th day of March 1910, with the Commissioner of Patents and on the 25th day of April 1911 letters patent were issued to him and numbered 990, 417 and that by virtue of the premises he was the exclusive owner of the patent, yet notwithstanding the premises the defendant having full knowledge thereof and without the consent of the plaintiff did from the 25th day of April 1911 infringe the letters patent by making and using the same containing constructions which were either identical with or the mechanical equivalents of Claims 1, 5 and 6 of plaintiff's patent; that plaintiff made said invention for his own exclusive use

and benefit and did not manufacture same for sale. That on account of said acts of defendant the plaintiff has been greatly injured and damaged and deprived of profits he otherwise would have derived and that he has sustained actual damages thereby in the sum of \$30,000. That by reason of the facts alleged the plaintiff prays for judgment against the defendant for \$30,000 and such further sum not exceeding in the aggregate three times the amount of such actual damages the court may adjudge and for costs.

The answer of the defendant (1) denies that the plaintiff was the true, original or first inventor of the patent sued upon or that said patent was not known or used in this country and not patented or described in any printed publication of this or foreign countries before his alleged invention, or that the same had not at the time of his application for a patent been in public use or on sale for more than two years. (2) denies upon information that letters patent were issued to plaintiff and denies any exclusive or any other right to plaintiff thereunder. (3) the answer further denies that defendant did make, use or vend the Forms for Moulded Conduits containing and embodying the invention set forth in letters patent or the infringement of the exclusive or any rights of complainant and denies that it realized any profits or royalties which complainant would have realized therefrom, or that plaintiff has incurred any

damages by reason of the defendants acts. (4) denies that plaintiff was the original inventor or discoverer of the invention sued upon or any material parts thereof and alleges that the same or substantial parts thereof had been in public use and on sale in this country prior to said alleged invention and for more than two years before, the application for said letters patent. Defendant specifies thirty-one instances of such prior use and publication: (R. p. 10) (5) The answer alleges on information and belief that the patent sued upon is invalid for want of patentable invention. (6) the answer further alleges on information and belief that the invention had been abandoned to the public prior to plaintiff's application. (7) denies that the patent sued upon is of any utility and that the same has been introduced into public use or that the public or any portion thereof had acknowledged complainant's exclusive rights therein; and alleges that the Patent Office had so limited the claims in said patent that they did not cover the construction used by the defendant. (8) the answer further affirmatively alleges that the forms used by defendant at the time this suit was brought and prior thereto was a form for moulded conduits in common use in the city of Seattle and elsewhere long prior to the date of plaintiff's application for the patent sued upon; that plaintiff made his original application describing in his specifications therefor the form of moulded conduits in exact manner and substance covering in

detail the form of moulded conduits now used and at all times heretofore used by defendant and alleges that plaintiff's application therefor was denied in toto by the commissioner of patents and thereafter plaintiff amended his specifications and claims and finally procured letters patent limited to a certain construction which constructions are not embodied in the form for moulded conduits now being used by defendant. (9) denies that plaintiff has been damaged in any sum whatever. (10) denies that complaintant had any rights in any forms for Moulded Conduits used by defendant. (11) denies that plaintiff has such title in the patent sued upon to enable him to maintain this suit.

The reply of plaintiff denies each and every allegation of new matter contained in the answer.

Plaintiff filed a praecipe for summons on the 24th day of November 1911, and the Clerk by mistake issued a subpoena. Defendant moved that the action be dismissed and said motion was overruled. On the 12th day of June 1912 the defendant moved for a continuance, which motion was resisted by plaintiff. The court sustained the motion and the cause was continued. After a period of over seven months having elapsed upon these issues the parties went to trial on the 15th day of January, 1913.

EVIDENCE.

The plaintiff's counsel outlined his cause to the jury in an opening statement. Counsel for defense reserving their opening statement.

HENRY W. BASSETT, the plaintiff, was called and a certified copy of the letters patent was admitted in evidence. (R. 30) Plaintiff testified that he was the sole owner of the patent in question and that he had given written notice to the defendant on two occasions of its unauthorized use of his invention both while the patent was pending and after its allowance. (R. 44 and 48). He explained the working of his invention by the aid of a model which he offered in evidence for the purpose of showing so much of his invention as in the opinion of his counsel had been used by the defendant and which was embodied in claims 1, 5 and 6 and not to illustrate every element of his patent embodies in other claims not alleged infringed.

ON CROSS-EXAMINATION witness testified

that he was a contractor and had followed that vocation for about five years; that he had been superintendent of construction for various companies and as a partner of Grant Smith and Com-

pany was superintendent of construction of the contract secured by that firm with the city of Seattle to construct a sewer therefor. That it was during this work that he conceived of his invention, and the patent therefor which was later issued to him and which now forms the basis of this action. That in July 1908 he put into execution the first embodiment of his ideas of conduit forms which were not perfect, and that he had difficulty with them; that changes were made from time to time in the bracing before he applied for a patent; that he left the bracing largely to his carpenters to use their discretion in placing it according to the size of the sewer they were constructing at the time. It was about this time after the construction work was under way that a man by the name of Paley approached plaintiff for the purpose of inducing him to adopt steel forms similar in design to his own, which he did not do. Witness was next examined upon elements of bracing and other particulars used by him at the beginning of his work, to which counsel objected.

On RE-DIRECT EXAMINATION plaintiff offered in evidence a certified copy of his application when filed, (R. 79), and testified that in going over defendant's work that he had made observations of the forms used thereon and with the aid of a model constructed from what he had observed, he illustrated wherein the elements embodied therein agreed and differed from his patent.

On RE-CROSS EXAMINATION plaintiff was asked, over counsel's objections what particular element was infringed in his first claim, and concerning the separate elements of his patent and his knowledge of the infringement of each element by the defendant. Over objections, counsel for defendant took witness into the prosecution of his case before the patent office and examined him extensively concerning his knowledge of the various rejections and amendments noted therein and of their legal significance. The plaintiff stated that he left this matter to his patent attorney H. L. Reynolds.

H. L. REYNOLDS testified that he had represented plaintiff as his attorney in the prosecution of his patent before the Patent Office and further offered to testify relative to the changes made in the application during the prosecution thereof and to explain the meaning of the various amendments and rejections noted therein upon which the plaintiff had been cross-examined, which explanation the court sustained an objection to. Witness then confined his testimony to the similarities and differences of the elements of the two devices based on claims 1, 5 and 6 of plaintiff's patent.

On CROSS-EXAMINATION the witness explained what was meant by the interlocking engagement referred to in claim 5 as differentiated from claim 2. The defense here introduced patents

set forth in their answer and over objections examined witness concerning his knowledge of them at the time he filed and prosecuted the plaintiff's invention for a patent. Counsel examined witness, over plaintiff's objection, as to his knowledge of the publication of Reid on Concrete and Reinforced Concrete Construction. Witness was further examined concerning the various interlocking engagements referred to in the patent. Witness testified that the engineering department was not responsible for the forms embodied in plaintiff's patent as the plans and specifications from which plaintiff had to construct the sewer illustrated the construction of a complete tunnel, but not of the means used in constructing it, whereas the patent covered the means used in constructing it. Witness further testified that the interlocking engagement as referred to in claim 2 was not illustrated in plaintiff's model introduced in evidence as it was not an element embodied in any of the three claims alleged infringed; that the models were made by his orders; that all the elements taken separately of practically every patent issued today are old; that the forms of patent with the invert partakes largely of the nature of a pioneer patent.

WM. FITTS testified as to his experience as a contractor and as to his experience in the use of plaintiff's patent and to its operativeness during the progress of the sewer construction.

ON CROSS-EXAMINATION he testified as to the different size sewers constructed with the plaintiff's forms. He admitted that he did not use in detail the exact form of bracing as exhibited in the Bassett patent drawings, but that he used practically the same system; that it did not require the same bracing for the small sewer 7 and $7\frac{1}{2}$ feet as for the $11\frac{1}{2}$ foot sewers and that the forms were braced according to the sizes built and the different pressures exerted thereon.

A. H. ELEXANDER for the plaintiff testified that he was an inspector for the city for the sewer work construction of both the plaintiff's and defendant's contracts with the city; that the difference in the two devices existed in the bracing, the templet and the transverse sill. That the defendant used the arch bracing in the place of the radial bars of the plaintiff's, a divided templet in the place of a continuous one and a solid sill as distinguished from the transverse sill as exhibited in the plaintiff's drawings.

P. J. DOOLEY testified that he was a carpenter and worked as such for fifteen years and was an employee of the plaintiff and had constructed a sewer with the use of the plaintiff's patent. That he generally employed a different system of bracing, but that he had used the exact type as exhibited in the plaintiff's patent drawings.

SWAN PETERSON the next witness testified that he was a contractor and had worked for the defendant company, that the forms used by the ~~aid of a model constructed from what he had~~ defendant consisted of segments like the ones in plaintiff's Exhibit 4 both above and below the invert; that a divided templet was used in place of plaintiff's continuous one, and that the transverse sill spanning the invert segments was made in one solid piece as distinguished from the type exhibited in the patent drawings; that wedges were inserted to expand the segments above the invert and that for a sixteen or twenty foot section one or more keys were inserted in the center of the invert.

ON CROSS-EXAMINATION he stated that wedges were used at times at the intersection of each of the segments of defendant's device and that the driving of the wedges tightened the segments below as well as above the invert.

The plaintiff then offered evidence to prove the extent which defendant had used the plaintiff's patent and evidence to show the saving to plaintiff in time, labor and material over and above unpatented forms open to the public to use, and in addition thereto evidence to show a reasonable royalty based on the number of lineal feet of sewer constructed by defendant with plaintiff's patented forms, which evidence over plaintiff's objection was stricken out by the court.

Here plaintiff rested and counsel for defendant moved the court to instruct the jury to return a verdict for the defendant, which motion was denied. Counsel for defendant then made an opening statement to the jury.

HENRY GEORGE was called as an expert to testify for the defendant and stated the different bearing stresses brought upon the respective elements of the patent from an engineering point of view and the inadequacy of the bracing thereof to enable the segments to withstand pressure externally applied; he testified in regard to the equivalency of the respective elements of the two devices and as to the speed they were capable of making.

HENRY W. BASSETT was called by the defense and testified that he probably had seen the book of Reid on Concrete and Reinforced Concrete Construction at a time after he was well along with his work. Upon this testimony the book was offered and admitted in evidence over plaintiff's objection.

GEORGE B. WORLEY testified for the defendant that he was superintendent of construction for the city at the time plaintiff was engaged in constructing a sewer. He said that he had encountered difficulty with the first system of bracing employed by the plaintiff; that he suggested Wm. Fitts and Paley to the plaintiff as men who could assist him in eliminating that difficulty; that Paley

had a steel form which he recommended to the plaintiff.

JOHN PALEY for the defense testified that he was a ship builder and had had an interview with George B. Worley in reference to submitting his plans for the construction of sewers. He further testified that this interview with Worley was after he had witnessed a demonstration of the plaintiff's forms in actual operation in the sewer construction; that he submitted certain plans for steel forms of sewer construction to the plaintiff, but which the record will show the plaintiff did not accept.

GEORGE B. WORLEY further testified that the defendant used bracing similar to that used by plaintiff at first, but discontinued it at his orders because of its inferiority, that the defendant's forms differed in all essential details from those of the plaintiff, that the interlocking device on the longitudinal ribs was impracticable, that the defendant's device was so put together it would stand alone if all of the bracing was taken out and that the plaintiff's form would collapse without bracing.

JEREMIAH DAHL testified that he was an inspector for the city with supervision over both plaintiff's and defendant's contracts therewith; that the bracing of the plaintiff's form was inadequate at times and that at his suggestion was corrected, which largely eliminated the trouble; that to his

knowledge the plaintiff had not used the interlocking where the longitudinal ribs of the segments project so as to interlock one with the other.

C. J. ERICKSON was called and related how he perfected his system of bracing. That he had not read plaintiff's patent when it was sent to him, but referred it to his counsel. He admitted using the following elements; the segments, a divided templet, a solid sill spanning the invert segments, the wedges on both sides for tightening up the segments and the invert segments.

C. D. HASKINS was called as an expert and testified as to the prior art based on the patents admitted by the court during the cross-examination of the witness Reynolds by the defense. He testified as to the various elements embodied in the various patents above referred to and showed their relation to the elements of plaintiff's patent; that he found all the elements in the plaintiff's patent were old elements based on the prior art; that the publication of Reid on Concrete and Reinforced Concrete Construction disclosed all the elements of plaintiff's patent save the interlocking device. That the amendments to plaintiff's specification was made to form the basis for the present claim 5 alleged infringed by the plaintiff.

ON CROSS-EXAMINATION he testified that no patent taken separately disclosed all the elements of plaintiff's patent, but that taken collectively they did or the mechanical equivalents thereof.

At the conclusion of this testimony the defendant rested. The plaintiff then called H. L. REYNOLDS as a witness in rebuttal who testified that the device upon which Paley sought a patent and which was finally rejected by the Patent Office and abandoned was not like the invention upon which the plaintiff secured a patent. He then explained what the interlocking engagement of Claim 5 had reference to; that Claims 1, 5 and 6 did not refer to or embrace any type of bracing whatever. He explained how the segments were expanded by wedges; that the transverse sill spanning the invert segments was an abutment for the segments which formed the arch and in that sense a part of the arch and not a brace. He testified as to the character of the Claims 1, 5 and 6 in comparison with the other claims of the patent; that a patent cannot be construed from an inspection of the drawings alone, but along with the specifications and claims; that no reference whatever to the invert was disclosed in the specifications or the claims of the Paley

application for a patent, which application was rejected by the Patent Office. Thereupon the testimony was closed.

Counsel for defense renewed their motion to instruct a verdict for the defendant. Which motion was denied. Counsel for plaintiff moved the court to direct the jury to return a verdict for the plaintiff which motion was denied. Thereupon the plaintiff requested certain written instructions to be submitted to the jury. As to certain of the instructions requested by the plaintiff the court asked information of counsel.

Counsel for plaintiff and defendant thereupon addressed the jury which was followed by the court's instructions. The jury later requested an additional instruction which was given by the court. Two forms of verdict were submitted by the court. The jury returned a verdict for the defendant. A motion for a new trial was made by the plaintiff and denied by the court and judgment entered for the defendant.

SPECIFICATION OF ERRORS.

Comes now Henry W. Bassett, plaintiff in error herein, by Richard J. Cook, his attorney, and particularly specifies the following as the errors upon which he will rely and which he will urge upon the prosecution of his Writ of Error in the above entitled cause.

I.

That the United States District Court, in and for the District of Washington, Northern Division, erred in overruling objection of counsel for plaintiff in error to question asked of witness Bassett in reference to a form of construction, said witness was using in performance of a contract prior to the filing of his application for a patent of which no relation had been established as to the form of construction used in the performance of that contract, and the structure embodied in his patent.

Q. How long did it take you to set up that first section?

A. I believe it was a couple of days before we got the first section—

Q. Then how long did it take you after you got those forms set up to pour the first section?

A. I believe we poured the first section there in a day.

Q. Didn't you have to tear the whole thing to pieces to get it down?

A. No.

Q. Didn't you in fact when you set up that section fail to make a calculation as to what would be the effect upon the invert there and when you got your concrete poured the invert was fastened in there by the edges of your concrete and you had to chop out the center segment in order to get out your invert?

A. No sir.

Q. Did you ever use the form of braces that you are exhibiting here to the jury?

A. I believe we did, I don't remember just the exact location; there was seven miles of that sewer and so many different sections operated upon that I would not remember exactly.

Q. Don't you claim in your patent that one of the particular elements is this matter of your bracing?

A. I claim the whole thing is a combination together.

II.

That the Court erred in overruling objection of counsel for plaintiff in error to the following question asked of witness Bassett, as to the size of segments used in his device, and in permitting said witness to testify over said objection at the trial of said cause.

Q. In making these segments did you at once determine the size that you would construct?

MR. SHEPARD: We object to that as immaterial.

THE COURT: Let me ask: does the patent claim anything as to the size of the segments.

MR. SHANK: No, Your Honor, but the patent shows three segments in the upper half and this shows five.

MR. SHEPARD: That is merely illustrative, there is not a word in the patent on it.

THE COURT: It is illustrative of what you claim to be the patent. Objection overruled.

MR. SHANK: I should say that the patent shows four and this shows six, to be exact.

A. I believe we did, yes sir.

Q. What was your object in doing it?

A. To handle easier.

III.

That the Court erred in overruling the objection of counsel for plaintiff in error, to the following question asked of witness Bassett on RE-CROSS EXAMINATION as to what particular element in his first claim was infringed, and in permitting said witness to answer said question over the objection of counsel for plaintiff in error.

MR. SHEPARD: We object to that as immaterial, because we don't claim any particular element, that is any one element is infringed, but the suit, the action is brought for an infringement of the combination. This is a combination patent and nothing else.

THE COURT: Your associate counsel stated a moment ago that it was only claimed specifications 1, 5 and 6 were the ones that were infringed. The declaration says that those are the ones that are particularly infringed. I would like to know what the construction is that counsel places on it.

MR. SHEPARD: We do not in this action claim anything for any infringement except on those three claims. Each of those claims is a combination claim because the whole patent is a combination patent.

THE COURT: Well, it is proper for the patentee to say in what particular those three specifications have been infringed. I don't know how we are going to know unless we are told.

MR. SHEPARD: He may state in what particular they have been infringed, but the infringement is not of any one element.

MR. SHEPARD: Your Honor will pardon me a moment. Speaking of the elements in patent law it means not the separate numbered claims, but the elements making up the combination.

A. I have not familiarized myself with those points. In fact I have not read them over for a long, long time and to go to work and designate each particular point from the numbers in the letters patent I couldn't do it.

Q. Now, Mr. Bassett, I want to ask you what particular element in your claim 6 you claim that we are using?

A. That is this peripheral motion here and the—No. 6—and the chance of wedging these away from the end—

Q. That is for the jury to say. You state the particular element there that you claim we are using.

A. It is this peripheral motion whereby these upper segments are permitted to slide down over here and rest against this No. 6 sill and wedge away from that.

IV.

That the Court erred in overruling the objection of counsel for plaintiff in error to the following question asked of witness Bassett, and in permitting said witness to answer said question over the objection of counsel for plaintiff in error.

Q. Don't you know as a matter of fact that upon your first application every claim you asked for was rejected by the commissioner of patents?

MR. SHEPARD: We object to that as not the best evidence. The records of the patent office will show that.

THE COURT: Objection overruled.

A. It was not. No sir. I don't think so. Mr. Reynolds was my attorney; I never knew the communications, in fact never saw the communications he had with the patent office.

Q. Did you ever sign more than one application?

A. Why, I did, yes.

Q. How many did you sign?

A. I think there was three, if I remember correctly.

Q. Wasn't there four, as a matter of fact?

A. There might have been.

Q. Why did you sign four applications?

A. Mr. Reynolds told me that they would not allow all that we were asking for.

V.

That the Court erred in refusing to permit counsel for plaintiff in error to have expert witness Reynolds, who filed and prosecuted the original application for a patent, enlighten the jury upon the technical contents of the application as originally filed in the patent office, and the changes made

in the form of amendments during the prosecution thereof leading up to final allowance.

Q. Mr. Reynolds, state to the jury what change, if any, was made in the specifications from your original form.

MR. SHANK: The document speaks for itself, if Your Honor please.

THE COURT: Well, is the document long and complicated?

THE WITNESS: If Your Honor will permit me, I can do this in a few minutes and show the jury exactly what changes were made.

THE COURT: Are your changes shown in there?

THE WITNESS: They are in red ink.

THE COURT: I think it will speak for itself.

MR. SHEPARD: We are seeking to do it to enlighten the jury on the subject.

MR. SHANK: The matter as to what may have been done is all recorded here absolutely.

MR. SHEPARD: Yes, but it is a matter of comparison. Now, Mr. Bassett has been cross examined at great length with reference to these changes.

THE COURT: The object of Mr. Bassett's cross examination was an entirely different matter; it went to whether or not he had made any changes subsequent to July, 1908.

MR. SHEPARD: That is changes in his invention.

THE COURT: Changes in his invention.

MR. SHEPARD: But here were changes in the claims of the patent.

THE COURT: Objection sustained.

Q. State whether or not the application was denied in toto.

THE COURT: Objection sustained.

Q. Mr. Reynolds, will you please show the difference in the first claim as originally drawn and in the first claim as finally allowed?

THE COURT: Objection sustained.

Q. State whether or not any changes were made in the original drawings?

THE COURT: Objection sustained.

VI.

That the Court erred in permitting counsel for defendant in error to introduce in evidence uncertified patent office copies during the cross examination of witness Reynolds as to a matter which was anticipatory of the defense as the copies purported to be copies specifically pleaded.

Q. Counsel for the defendant handed witness a copy of Barnett patent and asked him to state if that was a copy similar to the one he received from the patent office, and if he had it in his possession

at the time the commissioner of patents rejected his first nine claims and allowed the last two.

MR. SHEPARD: I object to that as immaterial, irrelevant and anticipating the defense which has been specially pleaded.

THE COURT: I don't think it is for the purpose of showing the circumstances of this patent; I don't think that is the object of the testimony at all. Objection overruled.

Witness then testified that he did not have the copy in his possession at the time as he had no opportunity of knowing anything about it, but that he got it afterwards.

Q. And you got this before you made your second application?

A. I didn't make any second application.

Q. You didn't make any second application?

A. No sir, I did not.

Q. What did you do?

A. I amended the present application. Amendment does not change an application; it simply corrects.

Witness then testified that he re-drew certain of those claims to make them conform to the ideas of the examiner, and that he had a copy of Barnett for consideration.

VII.

That the Court erred in permitting counsel for defendant in error to introduce a blue print before the jury during the cross examination of witness Reynolds, of which no reason had been given as to its source or by whom it was made or at the time it was made, and thus permitting said counsel to ask said witness "that if a carpenter had had such a blue print in his possession he could not have made the same thing in order to produce the result of which the plaintiff's invention had sought to accomplish?"

MR. SHEPARD: We object to that as immaterial and irrelevant, as not addressed to the issues before the Court.

THE COURT: Objection overruled.

A. That is a question that is impossible for me to answer for the reason that I have never seen those blue prints.

(Counsel for the defendant produced blue prints.)

MR. SHANK: I ask to have this sheet No. 14, blue print, marked for identification.

THE COURT: He is not trying to prove about the authenticity of the blue print. The objection is overruled.

A. A carpenter might have done so, but whether he would or not is another question.

VIII.

That the Court erred in permitting counsel for defendant in error to introduce a book before the jury during the cross examination of expert witness Reynolds, and asked him the following question to-wit: "Taking that book, would any carpenter have been able to construct the same plans that you here are claiming to be a novel thing and upon which you have sought an invention?" when the name of the book and the date of its publication had not been set forth in the answer.

THE COURT: Objection overruled.

A. I see nothing in these to indicate any form of construction for the molds similar to the construction at issue—and I naturally would infer that it is not at all certain or evident that a carpenter would have produced the same construction.

Q. Does not that book there in many illustrations contain collapsible forms and give the descriptions as to how it was built and how it can be operated?

A. It shows illustration of collapsible forms.

Q. And are not those collapsible forms made up of segments?

A. Made up of segments, but none of them of the character of the form shown in the patent.

IX.

The Court erred in overruling objection of counsel for plaintiff in error to the following question

asked of witness Fitts on cross examination in substance as to why he did not use the bracing and the form that Mr. Bassett perfected a patent upon, and if he did not know that the bracing as put in there absolutely would not work, and in permitting said witness to testify over said objection at the trial of said cause as follows:

A. Not exactly.

Q. Don't you know as a practical operator that if you did pour concrete around a form with that exact bracing that the segment 21 would be forced in by the pressure on the outside without some bracing at that particular joint?

A. Well, if you were to set that form right up on this space here and pour concrete around it for instance, any form—would raise up.

Q. Then I come back to my question, to use that form model 4, don't you know that segment 21 braced as that is would collapse inwardly when you poured that concrete?

A. No, no.

Q. Do you mean to state that segment 21 would not drop in when the concrete was poured around if there were not braces at that point?

A. The brace is at that point.

X.

That the Court erred in overruling the objection of counsel for plaintiff in error to the following

question asked of witness Fitts on cross examination as to whether a photograph shown him did not portray a system of bracing entirely different from that shown by the plaintiff's Exhibit "4", and in permitting said witness to testify over said objection at the trial of said cause.

A. Well, up to here this was practically what we used for the bottom.

Q. Well, look and see if it is.

A. Practically.

Q. Haven't you got a cross piece here in the center?

A. Perhaps. Let's see this.

Q. Don't your braces run across the inside diameter of that surface—of that sewer?

A. Well, the cross piece that you see there is possibly leading you to a misapprehension; in this particular size sewer you see that the band was in two pieces there.

Q. Yes.

A. The band was made in two pieces, but when it was set up it was one; that is probably the bar that you see across there.

Q. But if I am mistaken, what do you see; do you see anything like plaintiff's exhibit 4?

A. Very much like it.

XI.

That the Court erred in sustaining the defendant's motion to strike certain testimony of the plaintiff, and in not permitting said plaintiff to testify, as follows:

Q. Mr. Bassett, this patent having been granted to you in 1911, state whether or not you have let any royalties on it, any royalty contracts under it?

A. No sir, I have not.

Q. Did you or did you not have any applications from any persons negotiating with you to use your patent, this patent?

Q. How soon after the granting of the patent did you ascertain of your own knowledge that the defendant was infringing, as you claim, was using your patented device?

THE COURT: Objection sustained.

MR. COOK: We have cases, Your Honor, that hold in the absence of an established royalty, a reasonable royalty becomes the basis.

MR. SHEPARD: If Your Honor desires authorities to be produced we can show Your Honor that the courts have held that in the absence of an established royalty, owing to the youthfulness of the patent, the patent being granted so recently or otherwise, the plaintiff may show in an action at law for damages what is a reasonable royalty for the use of it or he may show as bearing upon it, to

be submitted to the jury, the profits that may be made or have been made by the defendant out of the use of the patent. We call Your Honor's attention to the fact that this invention was infringed; at least we have procured evidence to show that it was infringed before the patent was granted, after the application was made, and in cases of that kind, it having been impossible to establish any royalty while that application was pending, evidence of the profits and of the general advantage resulting from the use of the patent may be resorted to to enlighten the jury upon the subject of the damages caused to the plaintiff by infringing his device.

Q. Mr. Bassett, you yourself have used this device, have you not?

A. Yes sir.

Q. Will you now, with the permission of the Court, state to the jury what is the amount of saving in lumber or otherwise effected by using this patented device over using the previous unpatented devices?

MR. COOK: Your Honor, the Courts have held, in the absence of an established royalty, general evidence can be resorted to showing the saving that follows the use of these patents over and above any forms that were not patented. Now, we are not going to show the saving over and above forms that were patented, but over and above forms that were not patented, and open to the public to use.

THE COURT: I appreciate your question, but I say I still don't know what you are comparing it with, nor do I know that this witness is competent to make the comparison.

MR. COOK: The actual saving of the wood that was left in these sewers before forms were constructed and patented by Mr. Bassett, the actual saving in time and material.

The witness further testified, all of which evidence was stricken as to the amount of lumber required in constructing forms for the different size sewers without the patented forms and with the patented forms as to the difference in cost between them; as to how much of the lumber of the unpatented forms was waste; if there was an advantage or gain in economy of labor and material in the use of the patented device; as to what that advantage or gain was. All of which testimony was given for the purpose of establishing a basis for estimating the damages.

MR. SHANK: I move to strike from the record all testimony of this witness with reference to the amount of lumber, the percentages saved and the other testimony relating to the use of this patent, given upon the stand this morning since his having been recalled.

THE COURT: The motion will be granted and the jury instructed to disregard the testimony.

(Exception noted and allowed for plaintiff.)

XII.

That the Court erred in permitting counsel for the defendant in error to persistently ask expert witness George over the objection of counsel for plaintiff in error the following question:

Q. What I want is this: I want you to state whether you can determine and have determined the sustaining powers of this structure with this form of bracing, with that method of molding the concrete?

A. Yes sir.

Q. Now, state how that would act upon that internal structure consisting of that bracing if that form of mold would stand?

A. That system of bracing as shown on this drawing would not stand—is not stable.

XIII.

That the Court erred in overruling objection of counsel for plaintiff in error to the following question asked of expert witness George, in substance as follows:

Q. Can defendant's Exhibit "J" be operated with as great speed as plaintiff's Exhibit "K"?

A. It can be operated with much greater speed and economy than plaintiff's Exhibit "J".

XIV.

That the Court erred in overruling objection of counsel for plaintiff in error to the following ques-

tion asked of witness Bassett, the patentee, in substance as follows:

Would you say that this volume I hand you was the volume you saw out there at your work?

A. No, I would not say it was; I believe and presume that it was.

XV.

That the Court erred in overruling objection of counsel for plaintiff in error to the following question asked of witness Dahl, in substance as follows:

How many forms or sections would they put in on the Erickson job in a day?

A. Three sections and a half a day.

XVI.

That the Court erred in denying the plaintiff's motion to direct a verdict in favor of the plaintiff made at the close of all of the evidence.

The Court denied the motion; you can have an exception.

(Exception noted for plaintiff.)

XVII.

That the said Court erred in refusing to give to the jury upon the trial of said cause the following instructions requested in writing by plaintiff in error:

“First Instruction. The jury are instructed to return a verdict for the plaintiff with nominal damages of six cents.

XVIII.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instructions requested in writing by plaintiff in error:

“Second Instruction. The issue of letters patent is of itself presumptive or *prima facie* evidence that the invention patented is new and useful and the patentee is the first and true inventor. The defendant has not produced any evidence that overthrows this presumption; and the jury are therefore charged to find for the plaintiff on those issues; that is, that the plaintiff was the true and first inventor and the combinations described in the first, fifth and sixth claims were and are new and useful.

XIX.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Third Instruction. There are three questions of fact to be decided by the jury: (1) Whether the plaintiff's invention was a novel one when he made it; that is, whether the same thing in substance or legal effect had been made, known or used before the plaintiff invented it; (2) Whether the device used by the defendant infringed the plaintiff's patented device; (3) What damage resulted to the plaintiff if the defendant did infringe the plaintiff's patent.

XX.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Fourth Instruction. This patent is a combination patent. The question is not whether the different parts or elements of the patented invention are new or old, but whether the total group or combination of parts stated in any one of the claims, 1, 5 and 6 is new or old. The patent law allows a patent to be granted for a new and useful combination of parts, every one of which by itself is old and well known and was used long before the patent.

XXI.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Fifth Instruction. The means used for bracing, either by bars or sticks or by semi-circular or arched pieces, at the ends of the section or between the ends are not claimed as part of the patented combination in any of the claims 1, 5 and 6; and the use or non-use of either method of bracing has nothing to do with the questions of infringement or of novelty.

XXII.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error.

“Sixth Instruction. To constitute an infringement of a combination, there must be a use of the entire combination or group of co-operating parts, constituting the combination, either by using a literal copy of those parts or by substituting for one or more of the parts mechanical equivalents. If mechanical equivalents are used, they accomplish infringement equally as well as if only literal copies or duplicates of those parts are used, provided the total combination accomplishes the same new and useful result which the patented combined device does.

XXIII.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Seventh Instruction. A mechanical equivalent is something which performs the same function, or produces the same effect as a part of the total combination, and in substantially the same way, as the part for which it is substituted.

XXIV.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Eighth Instruction. If the jury finds that the defendant has used, after the date of granting the patent and after notice from the plaintiff to desist from such use, the combination of parts described in any one of the three claims 1, 5 and 6, or a com-

bination containing some of those parts or elements and other elements which are mechanical equivalents, performing the same function or operation in substantially the same way and to the same effect, and which are substitutes for the rest of the combination covered by anyone of those three claims then the jury should find that the defendant has infringed the patent in suit.

XXV.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Ninth Instruction. Infringement is caused by using the whole of a patented combination (including mechanical equivalents) even if something else not patented is added or used besides and along with the patented combination, but not by using less than the entire combination. The jury must therefore find (in order to conclude that the defendant has infringed the patent) that the defendant has used the whole of the combination covered by any one of the three claims, 1, 5 and 6;—keeping in mind the court’s instructions as to mechanical equivalents; and if it so finds, and also finds in the plaintiff’s favor as to the novelty of the patent, then its verdict should be for the plaintiff.

XXVI.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Tenth Instruction. If any one claim of those sued on has been used by the defendant, it is equally an infringement of the plaintiff’s patent right as if all three, or even all the seven claims allowed in the plaintiff’s patent were infringed.

XXVII.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Eleventh Instruction. The plaintiff not having shown any royalty contracts or sales of his rights to establish a royalty, he is entitled to show by general evidence what is a reasonable royalty; and he may show that by evidence of the comparative advantage in economy of time and labor and materials for using his patented device, as compared with any other device open to the public at the same time.

XXVIII.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Twelfth Instruction. If the physical or mechanical difference between the plaintiff’s patented device and the defendant’s device are enough to have secured to the defendant a patent (supposing that he was the first person who invented those differences), then they do not infringe the patent. If on the other hand, they are mere variations which

would suggest themselves to any skilled mechanic in that art, then they have not the quality of invention, and are mere colorable evasions, or mechanical equivalents. The test of invention on the one hand is the test of equivalency on the other hand. That which performs the same function in substantially the same way and with substantially the same result is a mechanical equivalent of what it displaces and is not the fruit of invention.

XXIX.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Thirteenth Instruction. If we compare claim 1 of the patent with the drawings and models of the forms used by the defendant, we find in each the skin or lagging against the outer surface of which the inner surface of the concrete sewer is formed, and this skin or lagging with its lengthwise and crosswise ribs makes the segments; we find in each the outer restraining band which holds the segments from separating by moving away from the center of the sewer and also acts as an end wall to the concrete section in each; we find in each the invert, consisting of segments or members which when fastened in place occupy the outline of the invert at the proper distance for filling up the invert with brick; we find that equally in each contrivance there can be a peripheral motion, that is, a motion along the line of the circle, by one or both

of the segments next to the invert, into and within the limits of the invert, although apparently there can be much more of that motion in the plaintiff's forms than in the defendant's; we find that in each form the segments are tightened against each other and against the outer band by wedges inserted at the proper places, and we find in each form a cross bar or sill spanning the invert, like the chord of an inverted arch. In the defendant's forms this sill is in the form of a solid arch, filling the entire arch of the invert and affording a rest or support for the upper segments of the circle. In the plaintiff's device, the sill is only a straight bar or beam, with posts extending from its underside to the joints of the segments in the invert. The only differences in the two devices are the interior bracing by a circle or by radial and other cross braces; the shape of the sill or arc filling the invert, the cutting of the outer band or hoop into two semi-circles in the defendant's form while it is shown in the plaintiff's drawings and model as a single piece, and lastly the precise shape and number of the members of the invert. The bracing is not one of the elements of the first claim, and it is open to any one to adopt any suitable mode of interior bracing. The question for the jury on this claim No. 1 is whether the differences which have just been pointed out are or are not mechanical equivalents—whether the corresponding things do or do not perform the same function or duty; in plain words do the same work, in substantially the same way and with substantially

the same result. That is a question of fact which the jury must decide in the light of the testimony of both expert and non-expert witnesses, of the patent specification, drawings and claims of the models and other exhibits and of their own knowledge of mechanics.

XXX.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Fourteenth Instruction. Infringement is not avoided by making in one piece what the plaintiff’s patent and drawings, or his actual use of his own invention show as made in two; or by making in two or more pieces what the plaintiff made or drew in one.

XXXI.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Fifteenth Instruction. If a certain part in the defendant’s form does the same work in the same way as the corresponding part in the plaintiff’s— if it is a mechanical equivalent—it does not avoid being an infringing device if it does that work more strongly or perfectly or if it also performs some other function not found in the plaintiff’s device.

XXXII.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Sixteenth Instruction. If any one element of a claim in the plaintiff’s patent is omitted from the defendant’s device then the defendant does not infringe that particular claim; but on the other hand, if the defendant does use all the elements of that claim or their equivalents and adds something else not in the plaintiff’s device, then the defendant does infringe even though the added feature may make the whole contrivance do better or cheaper or faster work.

XXXIII.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Seventeenth Instruction. The bracing shown in the plaintiff’s drawings and model is not an element of any claim in suit in this case; the doctrine of mechanical equivalents does not apply to it; and its use or disuse by either party has no bearing on infringement or any other issue. In view of what every intelligent mechanic must have known about bracing an arc or circle against pressure from outside inward, and of the descriptive matter in the patent specifications, it was open to any one to use any form of bracing. The jury therefore should disregard all the evidence bearing on the bracing used by each party.

XXXIV.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Eighteenth Instruction. A patentee is not confined to any particular form, size, shape or material in embodying or using his invention, unless either he expressly declared he claims only that form, etc., or the invention by its nature confines him to that form, size, shape or material. In neither of these ways is the plaintiff so limited. He expressly says in his specifications that he shows the form ‘which he prefers’. Anyone who uses the same elements, or substantially the same design infringes equally with one who uses a literal copy of the design.

XXXV.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Nineteenth Instruction. By comparing the models and drawings showing the device used by each party, the jury can test the charge by the plaintiff that his fifth claim infringed. In each it is plain to every one that certain elements—the segments, with their lengthwise and crosswise ribs, and the outer band, also acting as an end wall—are the same. It is for the jury to judge in the light of all these exhibits and also of the testimony of the witnesses, whether the means for expanding

or tightening the segments peripherally—that is, along the line of the circle—against the outer band are the same or are mechanical substitutes one for the other. And also whether the defendant has used the interlocking device by which the ends of the segments of one mold join to or lap over the ends of the segments of the adjoining mold. If all the elements of the fifth claim have been used by the defendant either by literally copying them, or by substituting mechanical equivalents, then the defendant has infringed that claim.

XXXVI.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Twentieth Instruction. In the same manner, the jury should compare the plaintiff’s and the defendant’s devices as to the sixth claim of the patent. It is for the jury to decide whether the defendant’s device contains either in the same form or by mechanical equivalents all the elements of the sixth claim. Unquestionably it contains some of them, such as the segments and the outer restraining band with its offset for the invert; and as to those which are not precisely alike, it is the province of the jury to decide whether the corresponding parts in the two devices are mechanical equivalents. If they are such mechanical equivalents, and if by that test all the elements of the plaintiff’s claim 6 are found in the defendant’s device,

then the sixth claim is infringed and the plaintiff is entitled to your verdict on that claim.

XXXVII.

That the Court erred in refusing to give to the jury upon the trial of said cause, the following instruction requested in writing by plaintiff in error:

“Twenty-first Instruction. In view of the argument of counsel to the jury, the plaintiff requests the court to charge the jury that the omission by the defense of some one element of a combination covered by one claim sued on, does not avoid infringement of another claim sued on if the defendant uses all the elements in the latter claim. In other words infringement is caused by using the entire combination covered by any one claim in suit, no matter if the defendant does not use the entire combination covered by some other claim in suit.

The interlocking device is an essential element in the fifth claim and that claim is not infringed unless the defendant uses it even if the defendant uses everything else in that claim. But the first and sixth claims do not contain that element and therefore they may be infringed by the use of all their elements without the interlocking device.

XXXVIII.

That the Court erred in giving the following instruction upon the trial of said cause during the course of his charge to the jury:

“There is a clear distinction between a pioneer invention and an invention merely of improve-

ments by a combination of mechanical devices. A patentee who is the original inventor of a device—a pioneer in the art—is entitled to a broad and liberal construction of his claims; but an inventor who only claims to be an improver is only entitled to what he claims and nothing more. In other words, the original inventor of a device has the right to treat as infringers all who make or use devices operating on the same principle, and performing the same functions by analogous means or equivalent combinations.” And particularly to that passage of it which says: “But if the invention claimed be itself but an improvement on a known device, by a mere change of form or combination of parts, the patentee cannot treat another as an infringer who has improved the original device by use of a different form or combination performing the same functions. The inventor of the first improvement cannot invoke the doctrine of equivalents to suppress all other improvements which are not mere colorable invasions of the first.

XXXIX.

That the said Court erred in giving the following instruction upon the trial of said cause during the course of his charge to the jury:

“If on the other hand you should find from the evidence that the patented device of the plaintiff was not a pioneer device, but that it consisted merely of an improvement or improvements upon prior devices, and that all of the elements contained in

the plaintiff's device were old elements, and that the claim of the plaintiff consisted merely of a combination of old elements, in such case the plaintiff would be limited to the precise device and combination shown and claimed in his patent and in that case if you find that the device made and used by the defendant, was not the precise device or combination shown and claimed by the plaintiff in his patent, you are instructed in such case that the defendant's device would not infringe the plaintiff's device even though the defendant's device operated on the same principle and performed the same functions by analogous means or equivalent combinations. In this connection you are entitled to consider the admission of the plaintiff repeatedly made during the trial that all of the elements contained in his patent are old, his claim being that the only new feature therein is the combination of the old elements.

XI.

That the said Court erred in giving the following instructions upon the trial of said cause during the course of his charge to the jury:

“The defendant was not permitted to introduce testimony in support of these allegations, (referring to printed publications), and you are instructed that there is no evidence in this cause that the patented device in question, or material or substantial parts thereof, had been in public use and on sale in this country prior to said invention and for more than two years before plaintiff's application for

letters patent, or that the same had been described and illustrated in printed publications prior to the date quoted for the supposed invention of the plaintiff, unless you find the same to have been described in exhibit "N" being Reid on Concrete and Re-Inforced Concrete Construction, which publication the Court admitted under the testimony of the plaintiff, to the effect that he had had such publication in his possession prior to making his application for a patent. His testimony to this effect was somewhat indefinite and if you should find that he did have such publication in his possession prior to his application for a patent, you will wholly disregard the same.

XLI.

. That the said Court erred in giving the following additional instruction upon the trial of said cause during the course of his charge to the jury.

Gentlemen of the Jury: You have requested an additional instruction in this case and I have sent for the reporter and had the attorneys for the respective parties present before giving the instruction. Your request was submitted in writing and reads as follows: "Will a duplication of one individual element be an infringement or, would it require a duplication of all elements, to constitute an infringement?"

It has been admitted by the plaintiff in this case that his patent is not for an individual element or elements claimed to be new, but consists of a new combination of old elements. This combination is

set forth in the respective claims of the patent, and I think that for the purposes of your inquiry each claim would be considered separately by itself, but in so considering it before you could find that that particular claim or any particular claim had been infringed, that is in the event that you find this was not a pioneer patent, as you were more fully instructed in the original instructions, if you should find that this was not a pioneer patent, then as you take up each claim of the patent, No. 1, 5 and 6, before you can find an infringement upon any one of those claims you must find that the defendant has used all the elements therein exactly the same way to produce the same result; if you find that that is not the case, then there has been no infringement upon that claim, in the event you should find it not to be a pioneer invention; if you should find it to be a pioneer invention, then the use of equivalents to produce the same result would constitute infringement.

XLII.

That the Court erred in overruling motion of counsel for plaintiff in error, to set aside the verdict of the jury herein, and to grant to the plaintiff in error a new trial upon the following grounds of error committed at the trial:

1. Error of the Court in excluding evidence offered in behalf of the plaintiff.
2. Error of the Court in admitting evidence offered in behalf of the defendant and objected to by the plaintiff.

3. Error of the Court in charging the jury in passages of the Court's charge excepted to by the plaintiff after the charge and before the verdict was rendered.

4. Error of the Court in refusing to give to the jury, as part of its charge, certain instructions requested by the plaintiff and pertinent to the issues in the case and to the evidence submitted to the jury.

5. Error of the jury in that the verdict was against the weight of evidence.

6. Error of the court in denying plaintiff's motion to direct the jury to find a verdict for the plaintiff.

7. That the verdict was contrary to the law and the evidence, and there was no evidence to support the verdict.

8. Error of the Court in refusing to submit to the jury the question of the plaintiff's right to substantial damages under the evidence submitted by the plaintiff on the subject of damages and afterwards stricken from the minutes by order of the Court.

This motion is made upon all the files and records of the Court and upon the minutes of evidence and exhibits at the trial.

Whereupon plaintiff in error prays that judgment of said Court be reversed and that for such other and further relief as to this Court may seem just and proper.

BRIEF OF THE ARGUMENT.

From the statement of the case and the record the court will observe that some of the assignments of error include consideration of questions of a similar character, hence in the argument they can be conveniently grouped together. By this method the argument will be more intelligible to the court than if presented separately in the numerical order of the specifications.

Specifications, 1, 9, 10, 12, 21 and 33.

The first, ninth, tenth, twelfth, twenty-first and thirty-third specification raise substantially the same question. The substantial part of the testimony of the first specification. (R. 347, 348). The testimony appearing in (R. 59 to 70).

The effect of the first ruling complained of was to permit counsel of the defendant to cross-examine the plaintiff Bassett in reference to the element of bracing and other particulars used by him on a job that was undertaken and carried out by the plaintiff as a contractor with the city of Seattle prior to the filing of his application for a patent, of which there was no relation shown between the elements used on that work and the elements embodying the structure of his patent. We contend that such testimony is inadmissible (a) As the elements the plaintiff Bassett used during the performance of that contract were experimental in

character as the patent drawing disclosed were not embodied in his patent, hence it could not be resolved against him because of this use or disuse.

“Q. How long did it take you to set up that first section?

A. Well, sir, I don't remember; I know that—

Q. Well, what is your best recollection, you were superintendent of the job and paying the bills?

A. I believe it was a couple of days before we got the first section—

Q. Didn't you in fact when you set up that section fail to make a calculation as to what would be the effect upon the invert there and when you got your concrete poured the invert was fastened in there by the edges of your concrete and you had to chop out the center segment in order to get out your invert?

A. No sir.

Q. Did you ever use the form of braces that you are exhibiting here to the jury?

A. I believe we did.

Q. Where?

A. I don't remember just the exact location, there was seven miles of that sewer and so many different

sections operated upon that I would not remember exactly.

Q. Don't you claim in your patent that one of the particular elements is this matter of your bracing?

(b) That such testimony was inadmissible for the reason that it referred to an element not recited in any one of the three claims of the plaintiff's patent alleged to be infringed, viz. Claims 1, 5 and 6, (c) that such testimony was extremely prejudicial to the plaintiff as the admissibility of this testimony by the court led the jury to infer that such bracing was as much an element of the plaintiff's patent as though it were the identical type illustrated in the plaintiff's patent drawings (R. 32).

(d) The cross-examination of the plaintiff should have been confined to the elements in his patent and not permitted to go into what was used and discarded by the plaintiff during the experimental stage of his invention and not embodied in his patent.

The ninth specification (R. 356. 357) the testimony itself is found at (R. 159 to 169). We contend that the ruling of the court below as to the admissibility of this testimony was erroneous. (a) The element of bracing was not an element of any of the three claims alleged to be infringed as it is a well known principle of patent law that a defendant

cannot import an element into plaintiff's patent claim, in order to escape infringement by attempting to show a dissimilarity of the element they used and the element they seek to import into the plaintiff's claim or claims.

Bresnahan et al vs Tripp Giant Leveller Co. (two cases) 102 Federal Reporter 899. The rule is stated as to the construction of claims, that the claims of a patent should be construed where they reasonably may be, to cover the entire invention of the patentee; and where a patent contains several claims, some of which are limited to details, the others are, *prima facie*, not to be restricted by insisting that they contain, as necessary elements, the particulars which are specifically covered elsewhere.

Judge Putman in this decision said as follows:

“Claim No. 1 has relation, by its express terms, to that art of the machine which has a duplicated machanism. Claim 4 has relation to a part of the machine which does not necessarily involve a duplicated mechanism. Each claim may well cover a distinct invention. To hold that Claim 1 necessarily involves the details which are set out in Claim 4, which details may be used in a machine with only one jack and one mould, would be to so limit Claim 1 that in effect it would be no broader than Claim 4. This is practically the substance of

the contention of the appellants. If the patentee's invention is broader than that set out in Claim 4, the limit which the appellants thus seek to place on Claim 1 would be contrary to the rule so steadily applied in this circuit, that claims ought to be construed, where they reasonably may be, to cover the entire invention of the patentee. The contention is also opposed to the general rule of construction, applicable where there are several claims, to the effect that, if some of the claims are limited to details, those which remain are *prima facie* not to be fettered by insisting that they contain, as necessary elements, the particulars which are specifically covered elsewhere."

The tenth and twelfth specifications (R. 357, 358) and R. 361). The testimony appearing (R. 159 to 168) (R. 204, 205). The errors referred to in the above specifications are based substantially on the same grounds as covered by the first and ninth specifications of error.

The twenty-first specification (R. 364) and the thirty-third specification (R. 371) were requested instructions which were refused by the court. These instructions are likewise predicated upon the first, ninth, tenth and twelfth specification of error. We contend that these instructions state the law of combination patents as applicable to this case. Walker on Patents, p. 179, says as follows:

“A claim will not be narrowed by importing into it by construction any dispensible element in order to enable the infringer to escape the consequences of his infringement. *Lamson Coast Refrigerating Co. v. Kiplinger*, 45 Fed. Rep. 249. On p. 180 Walker says as follows:

“The claim is a statutory authority prescribed for the very purpose of making the patentee define precisely what his invention is; and it is in justice to the public as well as an invasion of the law to construe it in any manner different from import of its terms.” *White v. Dunbar*, 119 U. S. 51. “Since the inventor must particularly specify and point out the part improvement or combination which he claims as his own invention or discovery; the specification and drawings are usually looked at only for the purpose of better understanding the meaning of a claim and certainly not for the purpose of changing it and making it different from what it is.”

Howe Machine Co. vs National Needle Co.,
134 U. S. 394.

Specifications 2, 31 and 34.

The second, thirty-first and thirty-fourth specifications are substantially the same (R. 348 and 349, 370, 371) the testimony appearing (R. 72, 73, 74, 75). The trial court over the objection and exception of plaintiff in error permitted counsel

for the defendant to cross-examine the plaintiff *as to the size he first made the segments*. This ruling clearly cannot be sustained as it places a limitation on the plaintiff's patent which is not in any sense suggested or embodied therein and further that the court's legal conclusion of the scope of the patent based from what the drawings illustrate only, is erroneous and cannot be upheld. All italics are ours. Walker p. 180, says as follows:

All italics are ours.

“Since the inventor must particularly specify and point out the part improvement or combination which he claims as his invention or discovery the specification and drawings are usually looked at only for the purpose of better understanding the meaning of a claim and certainly not for the purpose of changing it and making it different from what it is.

Howe Machine Co. vs. National Needle Co.,
134 U. S. 394.

It is clearly evident from the court's ruling at the bottom of p. R 73, that the court only took the drawing of plaintiff's patent into consideration in arriving at the scope of the patent.

Nathan vs. Howard, 143 Fed. 889.

The court said:

“A segment has been omitted. That which remains performs the function of the complete ring, perhaps not so well as if the ring had been completed. But the impairment of the function of this hollow ring by omitting a short segment will not escape infringement.”

Macomber on patents says as follows: “A mere change of form does not avoid infringement even if the change of form is a distinct improvement.”

American vs. Serton, 139 Fed. 564.

In the case of *Whitley v. Fadner*, 73 Fed. 486, the rule is stated, infringement is not avoided merely because the alleged infringing device is better, more useful and more acceptable to the public.

Specification 3.

The third specification (R. 349) and the testimony appearing (R. 84 to 89) we contend that the ruling of the court in this instance as to the admissibility of testimony was erroneous, for the reason that it does not reach the legal merit of the question. It is a well settled principle of patent law that in a combination claim, a particular element of that claim is not capable of infringement in itself, and to permit counsel for defendant to cross-examine the plaintiff as to what particular element in his first claim is infringed would be misleading, for the reason that it would not be responsive to any ques-

tion of law or fact regardless of the answer. A combination claim is an entity and cannot be infringed unless all of the elements or their equivalents embodied therein are present in the defendant's device. It becomes a question for the court to limit the examination of the witness to questions that are susceptible of a proper answer that tends to reach the legal merits which in this instance is impossible. To answer the question correctly would be for the plaintiff to admit that no particular element of any claims was infringed by the defendant and this would lead the jury to infer that the defendant does not infringe any particular element, hence the claims are not infringed from that deduction, whereas the particular element referred to was not infringed by itself, yet the defendant's use of that particular element with the other elements of the claim was legally infringed with the group as an entity, and not as a particular element.

Rowell vs. Lindsey, 113 U. S. 97 L. Ed. 28
906.

Specifications 4 and 5.

These specifications (R. pp. 350 and 351) are very much alike and may be grouped together for the purpose of directing the attention of this court to the degree which the lower court erred in the trial of this case and prejudicial to the plaintiff's rights.

The trial court compelled plaintiff, a contractor, to answer technical questions (R. pp. 98 to 106) relative to the rejection of certain claims and the number of applications made by him in the prosecution of his patent before the patent office, while on the other hand, the court sustained defendant's objections (R. pp 109 to 114) to questions asked of plaintiff's patent attorney, the person most competent and qualified to know, relative to what changes and amendments were made during the prosecution of plaintiff's application for patent.

If the court's reasoning is correct that the record through the medium of the wrapper, file and contents, speaks for itself (R. p. 113) in sustaining defendant's objections, then the reasons are stronger in favor of the application of the same rule of evidence to the questions asked of the witness Bassett. Especially, in view of the fact that witness Reynolds, plaintiff's patent attorney, was not permitted to clear up the error and misleading impression gained in the minds of the jury that more than one application had been filed by plaintiff. (R. p. 99, l. 19).

Q. Did you ever sign more than one application?

A. Why, I did, yes.

Q. How many did you sign?

A. I think there was three, if I remember correctly.

Coupled with the additional fatal impression that each new amendment meant a rejection of the former application and a subsequent change in the invention.

Specification 6.

The sixth specification of error (R. pp. 353, 354), and the testimony appearing (R. 133 to 137). It is a well settled principle of law that the cross-examination of an expert is limited to the testimony adduced under the examination in chief. Walker on Patents, p. 397, par. 501:

“Where an expert in his direct examination explains the whole or a part of the prior art his cross-examination may extend to the same source of knowledge or domains of experience, but where an expert is giving testimony in chief upon points of fact relative to infringement and confines their testimony to the similarities and differences between the plaintiff’s patent and the defendant’s doings he cannot be cross-examined on the prior art; except by inquiry whether he took the prior art into consideration when forming his opinion on the significance of the differences between the plaintiff’s patent and the defendant’s doings. That exceptional question is proper; because the an-

swer will show whether the expert treated the plaintiff's patent as a primary patent, or treated it as a secondary patent, when he was weighing the differences between it and the defendant's doings; and because the validity of his estimate of these differences may depend on whether he was right or wrong in treating as he did in that respect.

“The cross examination of experts cannot extend to inquiries into the characteristics of things not relevant to the case put to them for the purpose of testing their knowledge or their fairness; because if the answers appear to be undeniably correct they would be wholly immaterial and if though to be erroneous they could be shown to be so, only by the testimony of others, who might themselves be the mistaken ones. To allow such a question would thus operate to introduce an immaterial issue of fact into a case and to draw the attention of the jury away from the issues of the pleadings, *Odiorne v. Winkley*, 2 Garrison 51, 814.”

Specification 7.

The seventh specification of error (T. of R. pp. 354, 355), and the testimony occurring (T. of R. pp. 138, 139 and 140). The position taken by the court is clearly at variance with the law governing the range of cross-examination of expert witnesses as referred to in the sixth specification. Furthermore

the defendant failed to comply with the statute in pleading this blue print upon which this specification is predicated; before it can be introduced in reference to any particular, and for another reason the defendant failed to lay a foundation for its introduction, before such evidence can have any bearing upon either novelty or invention it must be shown to exist before the invention or in public use two years prior to the filing of an application for a patent, when and where the blue print was made and by whom it was made, none of which was done in this instance. Rev. St. § 4920.

Specifications ~~11 and 27~~. 8

The eighth specification of error (T. of R. pp. 355 and 356) and the testimony appearing (T. of R. pp. 140, 142 to 148). This error of the court refers to much the same particular as the error alleged in the seventh specification, that is to say, that the book of Reid on Reinforced Concrete and Concrete Construction, referred to on cross-examination of plaintiff's witness had not been pleaded under the requirements of the Revised Statutes nor had the alternative of thirty days' notice before trial been given to the plaintiff. Rev. St. § 4920.

Specifications 11 and ~~12~~. 27

The above specifications (R. pp. 358 and 366) wherein the plaintiff claims the lower court erred, refer to the question of damages. The evidence

which the trial court ordered stricken from the record appears (R. pp. 178 and 201) and relates (a) to the extent of use of plaintiff's forms by the defendant, (b) a reasonable royalty therefor, (c) the advantage and saving in time, labor and material in the use of the Basset forms over and above other forms open to use by the public.

The plaintiff alleged in paragraph 4 of his Declaration (R. p. 5, l. 6) that he "made and used said patented invention for his own exclusive use and profit, and did not manufacture the same for sale," which facts are undenied. At the commencement of this action, owing to the youthfulness of his patent and the infringement thereof by defendant he had not been able to establish a royalty or license the use thereof. In such a case is there no rule to establish the measure of his damages? Is the defendant to profit by his own wrong doing? Is the rule of treble damages (R. S. 4919) without meaning or application to such a case? Owing to the character of plaintiff's patent and the defendant's piracy immediately after application and before patent, tended to defeat a license fee or royalty

The rule of damages in an action at law where there is no established royalty, market value or license fee, is declared in *Suffolk Co. v. Hayden*, 70 U. S. 318 and followed by the Circuit Court of Appeals in *McCune v. Baltimore and O. R. Co.*, 154 Fed. 63, decided in 1907 wherein other cases are

carefully examined and compared. The subject is so exhaustively treated that we feel justified in making full quotations therefrom.

The facts show that in the court below McCune, the plaintiff in error, brought an action at law against the B. and O. Railroad Co., to recover damages for infringement of a patent granted to him May 18, 1886, for a locomotive ashpan. McCune had never granted a license, established a royalty, or manufactured and sold the patented device. There was testimony tending to prove the defendant infringed the patent. Thereupon the plaintiff offered to prove the utility and advantages of his patented device, that it had been appropriated and used by a number of other railroads, and that this use, being without his consent, prevented the establishment of a market value therefor. This offer the court rejected, and directed a verdict for plaintiff for nominal damages. Whereupon the plaintiff sued out this writ and assigned for error the rejection of this testimony.

Buffington, C. J., said: "It is clear to us the rejected testimony was in substance the same as that admitted in *Suffolk Co. v. Hayden*, 70 U. S. 318. There 'no sales had been made of the patent by the plaintiff or of licenses for the use of it, so as to establish a patent or license fee as a criterion by which to ascertain the measure of damages'. The court below

admitted evidence as to the uses and advantages of this improvement over previous methods of cleaning cotton. In affirming this action Justice Nelson said:

‘There being no established patent or license fee in the case, in order to get a fair measure of damages, or even an approximation to it, general evidence must be resorted to. *And what evidence could be more appropriate and pertinent than that of utility and advantage of the invention over the old modes or devices that have been used for working out similar results?* With a knowledge of these benefits to the persons who have used the invention, and the extent of the use by the infringer, a jury will be in possession of material and controlling facts that may enable them, in the exercise of a sound judgment, to ascertain the damages, or, in other words, the loss to the patentee or owner by the piracy, instead of the purchase, of the use of the invention’.

“The statute of July 8, 1870 (Rev. St. Sec. 4919) made no change in the rule of damages in actions at law thus established. In *Birdsall v. Coolidge*, 93 U. S. 69, where *Suffolk Co. v. Hayden*, *supra*, was cited with approval, Justice Clifford, referring to the act of 1870, says:

‘Where the suit is at law, the measure of damages remains unchanged to the present

time; the rule still being that the verdict of the jury must be for the actual damages sustained by the plaintiff.'

"In *Root v. Railway Co.*, 105 U. S. 198, Justice Mathews made an exhaustive review of the patent statutes and decisions and cited *Suffolk v. Hayden* as deciding that 'in case where there is no established patent or license fee in the case, or even an approximation to it, general evidence must necessarily be resorted to'; and in *Tilghman v. Proctor*, 125 U. S. 143, it was again cited, in a full review of the patent cases bearing on damages, for the proposition that license fees and royalties are generally, 'though not always, taken as the measure of damages.' "

"It will thus be seen that *Suffolk Co. v. Hayden* has been approvingly cited and considered as authority for the principle, therein enunciated, that, in the absence of license fee or royalty, other proof can in an action at law be resorted to, to show the damage done to the owner of the patent. The law thus announced is conclusive of the case before us, unless *Suffolk Co. v. Hayden* was overruled by the Supreme Court in *Coupe v. Royer*, 155 U. S. 567. Assuredly the case is not overruled by name, and the question there involved and decided does not require a reversal by implication. In that case, which was an action at law, the court below had held 'that whatever value has been

received by the defendants through the use of this invention, so much has been taken from the plaintiffs, and they are entitled to have it restored to them.' ”

“Holding, then, as we do, that *Suffolk Co. v. Hayden* is unreversed and unqualified by *Coupe v. Royer*, it follows the court below erred, its judgment must be reversed, and the case remanded, with directions to grant a new trial.”

Also the rule is stated to be, “Plaintiff is entitled to a verdict only for the actual damages sustained by him because of and during the time of the infringement for which the suit was brought, and not to exemplary damages. Damages are to be measured by the actual loss to plaintiff, which must be shown. It may be shown by any means which will best establish the loss. License fees charged others may be used as guides. Where there is no other means of estimating damages the profits derived by the infringer may be considered, but it is not the controlling consideration. The test is what the plaintiff lost and not what the defendant gained.” 20 Cyc. 1020.

Macomber on The Fixed Law of Patents, Sec. 290.

Specifications 13 and 15.

The thirteenth specification (R. 361) and the testimony apeararing (R. 232 and 233), and the fif-

teenth specification (R. 362) and the testimony appearing (R. 257-260), raise substantially the same question. We contend that the court erred in permitting counsel for the defense to go into the relative speed of which the two devices were capable of making, for the reason that the speed of the two devices would rest largely with the contractors employed by the respective companies, and their method of proceeding in performing their respective duties assigned to them by the superintendent in charge. Walker on Patents, p 305, par. 347:

“Addition to a patented machine or manufacture does not enable him who makes, uses or sells the patented thing with the addition to avoid the charge of infringement. This is true even where the added device facilitates the working of one of the parts of the patented combination and thus makes the latter perform its function with more excellence and greater speed.”

Brislin v. Carnegie Steel Co., 118 Fed. Rep. 597.

That it is clearly applicable to this case as the bracing upon which the defense base their contention is an added element in so far as Claims 1, 5 and 6 are concerned and which under these claims the plaintiff has a right to adopt or not to adopt any suitable bracing as he sees fit. The record will show that the bracing used in the forms when con-

structing the smaller sewers will not have to be as extensive as the pressure thereupon would not be as great, and further that if a steel form would be adopted by the plaintiff, no bracing would be essential at all. The bracing is only necessary in wooden forms, as the record will show, due to the climatic conditions and the water which causes a shrinkage or expansion, as the case may be. The principle co-action is essential to elements of a combination claim. We submit that the bracing is not an element that co-acts with any of the elements of Claims 1, 5 and 6, in the sense of patent law. It is a brace to enable the structure—as assembled, to resist pressure externally applied.

Encyclopedia of Supreme Court Report:

“Although additional elements are necessary to render new and patentable device operative, it does not necessarily follow that the omission of these elements invalidate the claim, or that the precise elements described in the patent as rendering it operative, must be read into the claim, for in such case any appropriate means for making it operative will be understood.”

Loom Co. v. Higgins, 105 U. S. 580 and 584,
26 L. Ed 1177.

Evans v. Andrews, 122 U. S. 40, 30 L. Ed.
1064.

The element of bracing, which has been a source of much discussion, and which plaintiff claims is not an element of claims alleged infringed. The record will show that it was used to make the patent operative with increased efficiency. The defendant's expert witness testified on cross-examination that the bracing was not necessial in defendant's device (Record 284, bottom of page).

“Q. Now, you stated before this jury that in your model over here, the defendant's device, that you could take out that bracing, if it was properly made, and it would stand as an arch, did you not?”

A. “I said so.”

Q. “Then you do not claim that the bracing used has made that device more practical or an improvement, do you?”

A. “I don't. I have made no comment on that at all. I say that the bracing that you—that is used in the defendant's device, is absolutely by a different function—performs a different function and has not the same mode of operation.”

The defendant's other expert witnes has this to say in reference to the bracing, middle of page. (R. 227, 228:

Expert witness George:

A. In this figure, as is already shown, the setting up of wedges 'Q' produces a stable figure independent of any bracing, jog, sills or any of this interior details as shown on the drawing; now, when these wedges—(answer continued on next page, 228) in other words that ring, gentlemen, is the mechanical equivalent not of this drawing in any way, shape or manner, but it is the mechanical equivalent of a system of radial bracing having an infinite or indefinitely large number of radial braces:

Q. What you mean by an indefinite number is this: that if you were to take and set braces in figure one solidly all the way around the bracing in figure two would be equivalent to that?

A. It would be the equivalent; we would have the counterpart exactly.

We have here an admission by one of the defendant's experts that the defendant's device would stand as an arch without bracing, and the other expert admits that the defendant's arch construction, which he terms the ring, is the equivalent of an infinite number of radial braces set solidly around. The radial braces is the plaintiff's construction. Clearly if bracing is essential at all, from the testimony of the defendant's own expert, the defendant's arch bracing is the equivalent to the plaintiff's radial bracing, not only in the sense of patent law is it a mechanical equivalent, because

both perform the same function, but it is a principle of mathematics that infinity divided by any finite number does not reduce the result, for the reason that if it is infinity to begin with, it is so great that any subdivision thereof by any number smaller than infinity will not reduce it to finite quantities. Therefore if defendant's bracing is the equivalent of an infinite number of radial braces, why is it not an equivalent of as large a number of radial braces as it is practicable to use. It, at least, becomes a question only of degree, plaintiff using more braces than defendant, the braces being alike in character in both cases, differing only in number. Therefore, according to the testimony of their own witness, the bracing as used by plaintiff and defendant are equivalents.

The application of that testimony is this: If superior speed is a criterion of non-infringement by the defendant's device, and that superior speed is the result of the defendant's bracing, which the record all the way through shows is the bone of contention, then the defendant's own expert witness admits their bracing is the mechanical equivalent of plaintiff's as the above argument clearly shows.

Specifications 14 and 40.

The fourteenth specification (R. 361, 362), and the testimony appearing (R. 238 to 241), and the fortieth specification which was a part of the court's charge to the jury (R. 376), which we grouped to-

gether for the convenience of continuity. The court was clearly in error in the first instance under the requirements of the Revised Statutes, p. 4920, in permitting counsel to introduce Reed on Concrete and Reinforced Concrete Construction.

If the book had been in possession of the plaintiff at all it was months after he had started construction work (R. 240) with the use of his forms and not prior to his invention, or two years prior to the filing of his application for his patent which is no defense under the statute, even if he did have it in his possession prior to the filing of application for a patent and showing nothing further. The second error as to the court's charge to the jury, in the language of the court's charge as to printed publication:

“As to these allegations the court instructs you that it was incumbent upon the defendant to prove the same beyond a reasonable doubt, and that by reason of the failure of the defendant to properly plead such matters the defendant was not permitted to introduce testimony in support of these allegations and you are instructed that there is no evidence in this cause that the patented device in question or material or substantial parts thereof had been in public use or on sale in this country prior to said invention and for more than two years before plaintiff's application for letters

patent, or that the same had been described or illustrated in printed publications prior to the date quoted for the supposed invention of the plaintiff unless you find the same to have been described in Exhibit N. being Reid on Concrete and Reinforced Concrete Construction, which publication the court admitted under the testimony of the plaintiff to the effect that he had had such publication in his possession prior to *making his application for a patent*. His testimony to this effect is somewhat indefinite and if you should find that he did not have such publication in his possession prior to his application for a patent you will wholly disregard the same.”

We submit that the plaintiff having said book in his possession prior to making his application for a patent is no defense, and secondly its introduction in evidence is not in compliance with the Revised Statutes § 4920.

Specifications 16 and 17.

The sixteenth and seventeenth specification (R. 362) and motion for an instructed verdict appearing (R. 306). This motion is based upon the admission of defendant's pleadings of infringement and on the failure of the defendant to comply with the Rev. St. § 4920 in reference to pleading with particularity prior public use and prior publications, which eliminated from consideration these

questions by the jury. The allegations of the eighth paragraph of defendant's answer reads as follows:

“It says upon information and belief that the forms for moulded conduits used by it at the time this suit was brought was a Form for Moulded Conduits in common use in the City of Seattle and elsewhere long prior to the date when the said Bassett applied for his letters patent; that the said Henry W. Bassett made his application describing in his specifications therefor the form of moulded conduits in exact matter and substance covering in detail the Form of Moulded Conduits now used and at all times heretofore used by the defendant and that his application therefor was denied in toto by the honorable Commissioner of Patents and that thereafter the said Henry W. Bassett on several occasions amended his specifications and claims and finally procured letters patent limited to a certain construction comprising upper and lower series of longitudinal segments adapted to outline the conduit, the said segments being surrounded by restraining band supporting said segments with the lower series of the latter enough further from the center and the adjoining segments of the upper series, to permit the edges of the said adjoining upper segments moving peripherally within the segments of the lower or invert series, together with means for effecting the peripheral expan-

sion of the upper series of segments; and also a specific form of segment by which interlocking action between adjacent segments is attained, which constructions are not embodied in the form for moulded conduits now being or heretofore used by this defendant.”

As to the first part of the allegation where it says, “in common use in the City of Seattle and elsewhere long prior to the date when the said Bassett applied for his letters patent”; *Defendant’s failure to comply with the statute in reference to particularly pointing out in pleading, the place where this public use took place, and secondly, the failure of the defendant to introduce any evidence in reference to any form used in this city prior to the date of plaintiff’s invention, and thirdly failure of the defendant to give notice in compliance with Rev. St. § 4920, as the court so instructed the jury (R. 332):*

“You are instructed that under the provision of Section 4920 of the Revised Statutes of the United States, it is incumbent upon the defendant to especially plead, among other defenses the following: ‘that it (referring to the patented invention involved in the suit) had been in public use or on sale in this country for more than two years before his (plaintiff’s) application for a patent, or had been abandoned to the public’. The allegation last referred to is not a compliance with

this statute and you are instructed that there is no evidence in the record to support the same.”

And the court further charged the jury in reference to the specific patents set up in the defendant’s answer as follows, (R. 327):

“As to exhibits “A, B, C, D, E and F”, being respectively patents to Barnett, No. 628382; patent to Morris No. 837328; patent to Boswell No. 870269; patent to Dooley No. 910046; patent to Naas No. 209976; Patent to DePaolis No. No 826057; you are instructed that the same were not offered or admitted in evidence for the purpose of showing that plaintiff’s patent had been anticipated, or to show want of novelty in plaintiff’s patent, but only for the purpose of showing the state of the art at the time.”

It follows that prior public use and prior publication, negating novelty and anticipation is eliminated as defenses by the court’s above instructions concerning it. We next take up the second part of the paragraph in the defendant’s eighth allegation,

“That the said Henry W. Bassett made his application describing in his specifications therefor the form of moulded conduits in exact matter and substance covering in detail the Form of Moulded Conduits now used and at all times heretofore used by the defendant and that his application therefor

was denied in toto by the honorable Commissioner of Patents.”

This part of the allegation, we submit, brought the construction of the Wrapper, File and Contents of plaintiff's patent, directly to the attention of the lower court. It had been previously introduced in evidence, and from the testimony throughout this case, which had particular bearing upon this very question, and the contention made by plaintiff to have the attorney enlighten the jury, (R. 111, 112, 113, 114), upon these matters. Therefore it was incumbent upon the court to ascertain if the allegations as set up in the eighth paragraph of defendant's answer, were true or false, as this question brought up a question of plaintiff's rights, as well as questions of fact determinable conclusively by an inspection of the Wrapper, File and Contents of plaintiff's application for a patent, and a knowledge of the law governing the same by the court. We invite the court's attention to this state of facts; the Wrapper, File and Contents will show that the application was filed on March 18th, 1910; that the application was never denied in toto as to the extent of the original Drawings, Specifications or Claims; that the Drawings were never amended; that Claims 10 and 11 were deemed allowable and in fact were allowed in toto by the first action of the Examiner of Patents on the 12th day of May, 1910. This notification was mailed to the attorney of the plaintiff the applicant, and it will appear at the bottom of

this action which is designated as paper No. 2 by the Examiner that Claims 10 and 11 may be allowable. We especially call the court's attention to the fact that *Claim 10 here referred to is the exact claim which is numbered in the patent as Claim 6, verbatim* which is one of the claims *specifically alleged in the complaint as infringed by the defendant's device*. It was simply re-numbered by the attorney. There can be no other construction other than an *admission of infringement placed upon that part of the paragraph which alleges, "that the defendant used in detail the Form of Moulded Conduits in exact matter and substance covered by plaintiff's first application for a patent which was denied in toto by the honorable Commissioner of Patents,"* and which the instrument controverts *beyond the peradventure of a doubt, as to the original Drawing, the Specification and the claims*. It will be apparent to the court from the reading of the rest of the paragraph eight that infringement was escaped in the minds of the defendant and his counsel if there was a slight modification in reference to some particular element which was embodied by amendment later in the specification for a basis of subsequent claims; that unless the defendant used that particular element there could be no infringement of plaintiff's patent. The admission of use in detail of the plaintiff's first application for patent involves a *direct admission of the present Claim 1 and 5, as well as Claim 6 which is undeni-*

ably admitted as an infringement as it was allowed in toto by the Examiner as his first action shows.

That amendment to the specifications which the eighth paragraph refers to, *was not made in the specification until after Claim 5 was allowed.* Attention is directed to Paper No. 6 which bears out this undisputed fact. The change in the specification was suggested to the applicant for the first time in Paper No. 6. To quote the words of the Examiner: “apparently the interlocking action is assisted by the ribs 25, as shown in figure 2, but that relation is not described or claimed.”

Therefore the Claim 5 which was allowed by this action was not contingent upon that amendment requested above, and which the amended specification will also conclusively show, as will be pointed out later. This amendment was not made by the attorney for applicant until the 3rd day of February, 1911, and which the *instrument shows was required to form the basis of other claims involving that specific type of interlocking, viz, Claims 2, 3, and 4 of the patent.* We refer to the misstatement of fact of the defendant's expert (R. 278 and 279), where witness testifies, that this amendment in the specification requested by the Examiner in Paper No. 6, was made as the basis for Claim 5. It is enough to call the attention of the court that this is a *misstatement of fact, as Claim 5 was allowed before that amendment to the specification was made,*

the court's attention is directed back to the substance of the admission made in the eighth paragraph of "use in detail of the plaintiff's first application for a patent."

We find that Claims 5 and 6 were allowed prior to any amendment to the specification, *hence infringement by direct admission* of Claim 5 as well as Claim 6. As to Claim 1 which was allowed subsequent to this amendment to the specifications, it only requires a knowledge of what that amendment has reference to in order to ascertain whether that element later added to the specifications, is embodied as one of the elements of Claim 1. We submit that from a reading of Claim 1, that it is not an element of Claim 1 and from a construction of that claim which is clear and distinct in its terms, and in that case *no reference to the specification is necessary*, it cannot be inferred that the interlocking element is a part of same, therefore, if Claim 1 is read in the light, even of the amended specification, it will be apparent to the court that the claim has no reference in any sense whatever to the interlocking engagement referred to in that amendment to the specifications, nor to any interlocking engagement whatsoever. Hence *a clear admission in the pleadings alone of the infringement of Claims 1, 5 and 6 of plaintiff's patent, and of which is described in the specifications of the original application as filed, and in the amendment, contain the exact substance for their allowance.*

By analysis this admission of the defendant's answer conclusively shows that the *first application was not denied in toto* by the honorable Commissioner of Patents, as defendant claims, and going further, *the first specification as filed, was not denied in toto* by the honorable Commissioner of Patents.

We will now show that *even that part of the specification which was amended, was not denied in toto.*

That part of the specification as originally filed, read as follows:

“These segments are so arranged that those which are shown above the center line of the conduit have the ends with the lagging projecting farthest, next to the conduit section which has been completed, so that this projecting end of the lagging overlaps upon the transverse ribs of the segments in the completed section, while those which are below the center line of the conduit have the transverse ribs projecting at the same end.

Stated in another way, that part (rib or lagging) is made to project at the end next the completed section, which is above or uppermost, so that it may be supported upon the complementary part of the segments used to mold the completed section.”

The court's attention is now directed to amendment C, filed by the attorney on February 3, 1911, and which is embodied in the specification of plaintiff's patent, reads as follows:

“These segments are so placed that when set up, the ends of the segments forming the new section will overlap those of the section just completed, in such a way as to resist displacement while setting up and while placing the material of the wall, at least until the interior bracing has been placed. In some cases the outer skin of the segments of the new section will be outside the transverse ribs of the segments of the preceeding section, and in some cases this condition will be reversed.”

We submit that so much of the amended specification, as above quoted, is identically the same as the original. The attorney has simply described more in detail, the same construction as the former specification referred to, not introducing a new element, which bears out the contention of plaintiff that Claim 5, as originally allowed, before the specification was amended, has its basis in the present amended specification.

The following new matter which the attorney for plaintiff introduced in the amended specification, reads as follows:

“Also, the ends of the longitudinal ribs project half the thickness of the transverse ribs at one end and terminate at the center line of the transverse ribs at the other end, whereby the ends of the segments of adjoining sections interlock to secure exact registry and to prevent peripheral displacement.”

Clearly this later description is in compliance with the Examiner’s suggestion in action designated Paper No. 6:

“Apparently the interlocking action is assisted by the ribs 25, as shown in Fig. 2, but that relation is not described or claimed.”

The facts are these: the examiner called to the attention of the applicant’s attorney his failure to describe in the specification a feature illustrated in the drawings, namely: the projection of the longitudinal ribs half the thickness of the transverse ribs at one end and terminating at the center line of the transverse ribs at the other end,—which construction must be described in the specification before claims including that feature can be allowed.

The plaintiff is *not alleging that the defendant is using the element where the longitudinal ribs project half the thickness of the transverse ribs at the one end, and terminate at the center line of the transverse ribs at the other end. That construction is embodied in Claims 2, 3 and 4, and distinctly not*

in Claims 1, 5 and 6. Hence the specification as amended, in so far as Claims 1, 5 and 6 are concerned, is substantially the same as the specification before the amendment was made thereto. Therefore it was the duty of the lower court to grant plaintiff's requested instructions that the jury be directed to return a verdict for the plaintiff. For the reason that the pleadings conclusively admit infringement, as the Wrapper, File and Contents shows.

In *Jones et al v. Morehead et al*, 68 U. S. 165, 17 L. Ed. 662, in an action for the infringement of a patent, Justice Miller says:

“It, therefore appears that in point of fact, the defendants have not infringed the Sherwood patent, and if we were unembarrassed by the pleadings, we should dismiss the bill with costs.

“But the defendants have admitted in their answer, that they did make locks as described in Sherwood's patent, and when they afterwards asked leave of the court to retract that admission and deny the infringement, the court refused such permission. This request was made after the issue was made up, after much testimony had been taken, and its object was to deny a fact previously admitted under oath. It was a matter in the discretion of the circuit court, and we are not disposed to review its

action on that subject here, under these circumstances if, indeed, it can be done under any.

“An effort has been made by counsel to show that this admission has been waived, by the act of plaintiffs, in going into the proofs, and otherwise treating it as an open question. But this would violate a principle of universal application, both in proceedings at common law and in chancery, to-wit: that the proofs must correspond with the allegations. It would be subversive of all sound practice, and tend largely to defeat the ends of justice, if the court should refuse to accept a fact as settled, which is distinctly alleged in the bill, and admitted in the answer.” *Crockett v. Lee*, 7 Wheat. 522.

“The fact that the defendants did manufacture and sell locks of the character of those patented by Sherwood, must be accepted as established in this case by the pleadings.” In Fed. Cas. No. 7, p. 7523, the court said:

“Infringement is alleged in the bill, and the respondents are therefore, bound to answer it distinctly and unequivocally. In their original answers, their response to this allegation is qualified and equivocal. They do not deny the use of the invention described in the patent, but only that it was used ‘with a full knowledge of the premises mentioned in said bill of

complaint, and in violation of complainant's exclusive rights secured by the patent of 1864'. This clearly implies an admission of its actual use. And this implication is strengthened by the express admission in the amended answers that the cards, jacks, and mules stated, in their answers, to be in use by the respondents, were made and constructed, in some respects, substantially in imitation of the improvement claimed by the patentee. Thus not only failing to deny their alleged use of the complainant's invention, which he has a right to treat as a confession of its use, but, by their mode of answering, impliedly admitting it, the complainant is not required to make any further proof of infringement."

In *Chase v. Fillebrown et al*, 58 Fed. 374, the court said:

"The answer, however, admits that a portion of the goods sold by respondents was 'fabric alleged by the complainant to be such as is described and claimed in said letters patent'. This expression is, to be sure, obscure, and on a strict criticism might, be held not to be responsive; but, if any pleader is content to express himself obscurely, the rule is well settled that the adverse party is entitled to construe what is set out in the way most favorable for himself."

Does not the Record clearly show defendant's counsel's erroneous conception of patent office procedure and his firm belief that plaintiff's first application for a patent was rejected in toto? (R. 98, 99, 100), bottom of page).

Q. "Don't you know as a matter of fact that upon your first application every claim you asked for was rejected by the Commissioner of Patents?

Q. Did you ever sign more than one application?

Q. Wasn't there four as a matter of fact? (R. 99).

Counsel then read the original claims filed with the application and asked witness if he made that application. (R. 100).

Q. "And isn't it a fact that the Commissioner of Patents denied every one of them? (R. 101).

Q. Did you use the same Drawings all the way through? (R. 106).

Q. And you got this before you made your second application? (R. 133).

A. I didn't make any second application.

Q. You didn't make any second application? (R. 133).

A. No, sir; I did not. (R. 134).

Q. What did you do?

A. I amended the present application. Amendment does not change an application; it simply corrects.' "

Specification 18

The eighteenth specification (T. of R. 362). This instruction in its entirety was proper. The court in its instructions (R. p. 326, par. 4) eliminated the defense of public use and prior publications as the defendant failed to comply with the statutes and in (R. p. 328) the court further charges, that the defenses of anticipation and novelty is not to be considered in so far as the patents that were specifically pleaded in the answer are concerned; that they could be introduced only for the purpose of showing the state of the art at the time. By this failure of the defense to introduce any evidence in compliance with the Rev. St., § 4920 concerning the question of novelty or anticipation and as there was no testimony by witnesses showing that the invention which is the basis of this patent was in use or on sale in this country prior to the invention or two years prior to the filing of the application for patent, hence that presumption of novelty is clearly in favor of the plaintiff's patent and the presumption was not overthrown, it was therefore incumbent upon the court to charge the jury as

requested. The evidence of defendant's witnesses upon the question of novelty was unsupported verbal testimony as to single elements and no testimony that the combination was old, whereas the plaintiff admitted that the single elements were in themselves old.

Paley's rejected application by the Patent Office and abandoned by him, which was admitted in evidence, does not in the slightest degree negative novelty. Counsel for plaintiff withdrew objections to its introduction as the jury had gained an erroneous impression from the drawing which had been exhibited before them. Walker on Patents, says:

Sec. 58. "Novelty is not negatived by any prior abandoned applications for a patent. Abandoned applications for patents are not, by the statutes, made bars to patents to later applicants. They furnish no evidence that the processes or things they describe were ever made or used anywhere. Being only pen and ink representations of what may have existed only as mental conceptions of the men who put them upon paper, they do not prove that the processes or things which they depict were ever known in any country. Nor can they be classed among printed publications, for they are usually in writing, and are not published by the Patent Office."

Record shows plaintiff prior inventor.

Q. Mr. Paley, with reference to the beginning of the sewer construction made by the Grant Smith Company, what have you to say as to the time when this conference took place?

A. Well, when the Green Lake section of the trunk sewer was let and I happened to live on the line of survey and I wondered how they were going to construct this sewer, as I had never saw any of this construction work before, so I thought I would, having a mechanical instinct, I thought I would try and figure out some way, the most economical way to construct this work, so I went to work and I drew up a small or rather a rough pencil sketch—

Q. Now, was that before they commenced any construction work at all?

A. No, about the time that they started; oh yes, that was before they had started the construction work, yes sir

Q. Before they started the construction work?

A. Yes sir.

Q. Go on and state.

A. And after I had my pencil sketch developed I thought I would wait and see what system that

this Grant Smith was going to build this sewer with, so when they put in their first section of concrete, which I think was put in the University campus, if I am not mistaken, I think that was about where it was, I watched them erect their first form and I thought at the time when I saw it that it was not in any way a practical system to what my idea of the construction would be, but any way I said, "I will wait until they get through and then I will see how it comes out," but in the meantime, I saw Mr. Worley, etc. (R. p. 247 and 248).

Specification 19.

The nineteenth specification (R. 363) presents the question of facts applicable to this case, which should have been given to the jury in its entirety.

Specification 20.

The twentieth specification (R. 363) presents the law applicable to the patent ability of the combination of old elements which produce, in the combination, a new and useful result. This instruction applies to this case, and should have been given to the jury.

Farmer's vs Spruks, 127 Fed. 691, 62 C. C. A. 447.

In this decision the court said:

“It is true that East has not discovered any new elementary material for the making of barrels, and the elementary principle upon which barrels are constructed is old; but he has adopted a new form, and discovered a new combination, a diversity of method and a diversity of effect, and a new *modus operandi*, whereby it has been practically demonstrated that cheaper and better results are obtained, which benefit the world; and therefore, under the principles and precedents, he has become entitled to that protection which the patent laws are intended to secure for ‘any new and useful improvement on any art, machine, manufacture, or composition of matter.’ Such combination, however, simple and obvious, if entirely new, is patentable, and not the less so because up to a certain point he uses old methods and old materials.”

30 Cyc. 858 and 859.

“Where old elements are brought into a new relation; where by their interaction they perform new functions and produce a new result, there is a patentable invention. But it is not invention to merely extend the use of an old combination of elements, where no new result is produced and no new method of producing the old result.

“The invention in such case has nothing to do with the novelty or lack of novelty in the separate elements, but resides in the particular way in which the elements have been combined. When a combination is claimed it is said that there is an implied concession that the elements are separately old.”

Parks v. Booth, 102 U. S. 96, L. Ed. 54.

Macomber on patents quoting from the above decision:

“When the thing patented is an entirety, consisting of a separate device or of a single combination of old elements incapable of division or separate use, the respondent cannot make good the defense in question by proving that a part of the entire invention is found in one prior patent, printed publication or machine and another part in another, and so on indefinitely, and from the whole or any given number expect the court to determine the issue of novelty adversely to the complainant.

“Common justice forbids such a defense, as it would work a virtual repeal of so much of the Patent Act as gives to inventors the right to a patent consisting of old elements, when the combination itself is new and produces a new and useful result. New elements in such

a patent are not required, and if such a defense were allowed, not one patent of the kind in a thousand of modern date could be held valid. Nor is such a defense consistent with the regulations enacted by Congress in respect to the procedure in litigations in respect to patent rights.”

William Imhauser v Jacob E. Buerk, 101 U. S. 945, L. Ed.

Specifications 22, 23, 38, 39 and 41

The twenty-second, twenty-third, thirty-eighth, thirty-ninth and forty-first specifications appearing respectively (R. 364, 365, 374 to 378) include consideration of questions that are necessarily related. The first of which instructions presents the law of combination patents, and the application of mechanical equivalents thereto. This instruction should have been given to the jury, and a definition of mechanical equivalents, which is the subject of the following specifications to be considered at this time. It is not to be inferred that the jury would necessarily know the definition of a mechanical equivalent in the sense of patent law. That which in scientific physics is a different mechanical element, may yet in a mechanical combination, be a mechanical equivalent in patent law. The jury furthermore were led to infer, by the absence of the court to give the definition of a mechanical equivalent, that it would not apply to this case, viz: the court's

repeated statement to the jury, that the plaintiff admits that his patent is not for any element that is new, but for a combination of old elements, and the only instance where the court refers to mechanical equivalents, is in his discussion of pioneer patents, wherein he charges the jury that if they find that the plaintiff's patent is of a pioneer character, that the right of mechanical equivalents can be invoked.

Walker on patents says:

“Combination patents would generally be valueless in the absence of a right to equivalents. For a few combinations now exist or can be made which do not contain at least one element and effective substitute for which could readily be suggested by any person skilled in the particular art.”

Thrall v. People, 89 Fed. R. 721.

Bromer v. Schroeder, 106 Fed. 918.

Continental Bag Co. v. Eastern Bag Co., 210

U. S., 405 L. Ed. 1122.

“Infringement is not evaded by substituting equivalent elements for those set forth in the patented claim. Patentees of an invention consisting merely of a combination of old ingredients are entitled to equivalents, by which is

meant that the patent in respect to each of the respective ingredients comprising the invention covers every other ingredient which, in the same arrangement of the parts, will perform the same function, if it was well known as a proper substitute for the one described in the specification at the date of the patent.” 30 Cyc. 980.

Mhaueser v. Buerk, 101 U. S. 647, 656, 660-2.

The doctrine of mechanical equivalents is fully established by the foregoing, and many other cases and opinions, in both the lower and higher federal courts, but it is applied with discrimination to different classes of cases. In the case of an invention of a marked originality, striking out a new line of process, manufacture or mechanism, or what is called a “pioneer patent,” the doctrine is applied in a very broad way; but in one that is but a slight improvement in an old art, it receives a very narrow construction. Between these extremes the courts say that the doctrine must be applied in a proportionate degree. Speaking of this topic, Judge Sanborn of the U. S. C. C. A. 7th Circuit, said:

“But the great majority of patents falls between these two extremes. They are neither for pioneer inventions nor for improvements so slight as to be almost immaterial. While they do not evidence the first or the last step in the progress of the art to which they relate,

they often mark signal advances and protect useful improvements. The doctrine of mechanical equivalents conditions the construction of all these patents, and in determining questions concerning them the breadth of the signification of the term is proportioned in each case to the character of the advance or invention evidenced by the patent under consideration, and is so interpreted by the courts as to protect the inventor against piracy and the public against unauthorized monopoly."

Nat. Hollow Brake Beam Co. v. Interchangeable Brake Beam Co., 106 Fed. 693.

This is not a patent that can receive a very narrow construction from the prior art or from any evidence introduced by the defendant. The record will show that there was not a patent introduced disclosing the same device to produce the same result by even different combination of elements. In fact there was not a patent disclosing the means for constructing a sewer with an invert recessed for the insertion of vitrified brick. A new method of constructing moneletic sewers. Hence it follows that plaintiff's device was entirely new, designed for a new application, both from an inspection of the prior art and from the absence of any evidence disclosing that construction. Assuredly the court's charge (R. 374) bottom of page, cannot be applied to the plaintiff's patent. The court says as follows:

“But if the invention claimed be itself but an improvement on a known device, by mere change of form or combination of parts, the patentee cannot treat another as an infringer who has improved the original device by use of a different form or combination performing the same functions. The inventor of the first improvement cannot invoke the doctrine of equivalents to suppress all other improvements which are not mere colorable invasions of the first.”

The instruction given as set forth in Specification 39 (R. p. 375) is erroneous and extremely prejudicial for the reason that it denies to plaintiff to the protection under his patent of the law of mechanical equivalents. In effect, the court says that plaintiff's patent being merely an improvement on known devices by a combination of old elements cannot be a pioneer invention and therefore his rights are limited to the precise device and combination shown. In part, instructs the jury, (R. 375 l. 19), “if you find that the device made and used by the defendant, was *not the precise device or combination shown and claimed by the plaintiff in his patent*, you are instructed in such case that the defendant's device would not infringe the plaintiff's device even though the defendant's device operated on the same principle and performed the same functions by analogous means or *equivalent combinations*.”

The court in this instruction fails to recognize the distinction between a combination of old elements that produce a new and useful result and a combination of old elements which is merely an improvement on a known device. The law is well settled that the law of mechanical equivalents can be invoked as to the former as well as colorable evasions of the latter. The court also fails to recognize that a pioneer invention may result from the combination of old elements producing a new result in a new device. Also, that a pioneer invention may follow the combination of old elements which produce a new result in the improvement of the prior art when that improvement results in the attainment of a success showing marked originality over other devices of proven failures.

The instructions given by the court under the specifications numbered 38, 39 and 41 are erroneous for the additional reason that the defendant's admission in his pleading, Paragraph 8 of his Answer (R. pp. 12 and 332) and the wrapper, file and contents of plaintiff's application for patent, admitted in evidence, conclusively establish infringement, hence that issue should not have been presented to the jury for their determination.

Specifications 24, 25 and 26.

These three specifications (R. pp. 365 and 366) wherein plaintiff requested instructions entitling

him to a verdict if the jury should find any one of the three claims sued upon infringed by the defendant.

The plaintiff's right to the protection of the law of mechanical equivalents has been separately considered.

In this case there was no attempt on the part of the court to point out to the jury the similarities and differences between plaintiff's patented forms and those used by the defendant or to define or construe any of the claims. The jury were left to grope in the dark as to the meaning and scope of the patent.

During the progress of the trial the trial judge admitted that he had not even read the patent. (R. p. 67, 1. 24).

THE COURT. *I have not read the patent and of course I do not know.*

At the time the jury retired to consider their verdict, owing to the failure of the court to properly instruct them, they had no means of knowing whether a verdict of infringement could be based on the defendant's use of one element, all elements of one claim or all elements of the three claims. They had been given by the court but two forms of verdict:

“You will have two forms of verdict submitted to you in this cause, which, omitting title of court and cause, are as follows:

“‘We, the jury in the above entitled cause, find for the Plaintiff and assess his damages in the sum of One Dollar.’”

“If you find for the plaintiff have your foreman sign and return the foregoing form of verdict. If you find for the defendant, the following will be your form of verdict:

“‘We, the jury in the above entitled cause, find for the Defendant.’” (R. p. 342, l. 14).

This, in itself, was equal to a positive instruction that there were but one of two possible conclusions which the jury could arrive. Hence, they later submitted to the court a request in writing (R. p. 343, l. 11) for an additional instruction upon the following point, “Will a duplication of one individual element be an infringement, or would it require a duplication of all elements to constitute an infringement.”

The court’s additional instruction, that “each claim would be considered separately by itself,” (R. p. 343) at this late hour of the trial, with its many qualifications, surely, could not, in the

face of the instructions as to verdicts, together with all that preceded tending to convey an erroneous impression in the minds of the jury cure the harmful and prejudicial omission to properly instruct upon the questions considered.

The rule is stated in Walker on Patents, p. 168, as follows:

“But two claims are not co-extensive, which specify different combinations of parts of a process, machine or manufacture, even where some of those parts are in each of the combinations; because the claim which specifies fewest of these parts, may be infringed by what will not infringe any claim specifying more of those parts.”

Suffolk Co. v. Hayden, 3 Wallace, 315.

Yale Lock Co. v. Sargent, 117 U. S. 378.

Dobson v. Cubley, 149 U. S. 120.

A yet stronger and more cogent reason appears why this omission to instruct was greatly prejudicial when considered in connection with the court's ruling in the admission of evidence in answer to questions of this character; (R. p. 84, l. 9).

RE CROSS EXAMINATION BY MR. SHANK:

Q. Mr. Bassett, without referring to the letters patent, can you state to the jury what element in your first claim is infringed, as you claim?

From which the jury must have concluded that each separate element in a combination patent could be infringed, while on the other hand, that proof of each separate element of the combination patent being found in the prior art would disprove infringement. When this ruling is combined with the foregoing ruling as to the verdict, it becomes clear as to the causes of the jury's confused impressions prompting them to ask:

“Will a duplication of one individual element be on infringement, or, would it require a duplication of all elements to constitute an infringement.”

Specification 28.

The twenty-eighth specification (R. 367) is another way of stating the criterion of a mechanical equivalents, in order to enable the jury to look at the two devices before them for consideration, in order to arrive at a true conception of whether the defendant's device is a mechanical equivalent of plaintiff's.

Specifications 29, 35 and 38.

These three requested instructions (R. pp 367 and 372) the court erred in refusing to give. Each relate to one of the three claims sued upon and in the light of other proper instructions furnished the jury a rule and guide for testing and comparing separately the respective elements of the separate claims of the plaintiff's patented device with that used by the defendant. These instructions would have brought to the minds of the jury in a definite and certain manner the questions which they were called upon to decide and not left them in a state of uncertainty and doubt which the omission thereof produced, as evidenced by their request for an additional instruction after the case had been submitted to them. (R. p. 343, l. 14).

In *Coupe et al v. Royer*, 155 U. S. 565, 39 L. Ed. 263, the court says:

“The doctrine of the cases is aptly expressed by Robinson in his work on Patents, Vol. 3 p. 378, as follows: ‘Where the defense denies that the invention used by the defendant is identical with that included in the plaintiff's patent, the court defines the patented invention as indicated by the language of the claims; the jury judge whether the invention so defined covers the art or article employed by the defendant.’”

The question of the construction of the claims of a patent is the province of the court, and does not rest with the jury.

March v. Quick Meal Store Co., 51 Fed. 203.

Nat'l. Car Brake Shoe Co. v. Terre Haute

Car Mfg. Co., 19 Fed. 514.

In determining the question of infringement of a patent for a combination it is necessary to look at the mode of operation or the way the device works, as well as at the results, and the *means by which that result is attained*.

Electric Protection Co. v. American Bank

Protection Co., 184 Fed. 916.

Specification 30.

The thirtieth specification appearing on (R. 369, 370). This requested instruction is clearly applicable to this case in view of defendant's contention that the template disclosed in the plaintiff's drawing, is in one continuous piece, whereas in the defendant's device it is divided. Also the transverse sill of the plaintiff's device shows two props thereunder in place of the continuous or solid sill as disclosed by the defendant's device. This instruction states the law applicable thereto, which is in harmony with the decision of the Federal and United States Supreme Court.

In *Weber v. Automobile and Accessories Mfg. Co.*, 190 Fed. 189, the court said:

“It is scarcely necessary to cite authorities to the effect that infringement cannot be avoided by making in one piece something that the inventor made in several, when in practical operation it does not make the slightest difference whether one form of construction or the other is adopted. Such contention may be dealt with as briefly as it was by the Circuit Court of Appeals for the Second Circuit in *Capital Cash Register Co. v. National Cash Register Co.*, 70 Fed. 709.”

In *Wheeler v. Clipper Mower Co.*, Fed. C. 17493, it was held: A patent for a device cannot be avoided by dividing the device into two parts, which when combined, produce the same result in substantially the same way.

Strobridge v. Lindsey, 6 Fed. 510.

Stebler v. Riverside Heights Orange Growers Ass'n., 205 Fed. 735.

Weber v. Automobile and Accessories Mfg. Co., 190 Fed. 189.

Specification 32.

The thirty-second specification (R. 370.) This instruction is applicable to this case, as admittedly the transverse beam that holds the template together

in the defendant's device is an added element. Hence this instruction should have been given to the jury.

Clearly the testimony of the defendant's expert witness discloses that the horizontal brace or beam added to the template, was to enable easy transposition and retention of shape while in use. It performs no mechanical function in the sense of patent law, (R. 222).

Walker says as follows:

“Addition to a patented machine or manufacture does not enable him who makes, uses, or sells the patented thing with the addition, to avoid a charge of infringement. This is true even where the added device facilitates the working of one of the parts of the patented combination, and thus makes the latter perform its function with more excellence and greater speed; or where the added part hinders the patented combination from having some of its minor merits. And duplication in a machine or manufacture, of one of its parts or features, is but a form of addition thereto; and falls in the same category, in respect of not avoiding infringement of a patent on that machine or manufacture.”

Infringement of a patented combination cannot be avoided by merely using another part in addition to the combination.

Williams v. Barnard, 41 Fed. 358.

Rees v. Gould, 82 U. S. 187.

Nathan v. Howard, 143 Fed. 889.

Dunlop v. Willbrandt, 151 Fed. 223.

Specification 37.

Specification thirty-seven, (R. 373). This instruction is clearly applicable to the law of combination patents where the claims are not co-extensive, and especially so in view of the court's understanding that there must be an infringement of all claims to constitute infringement of the patent, (R. 307).

THE COURT: "I understand, Mr. Shepard, that if your Claims 1, 5 and 6 or any one of them are for a new element in itself that that could very readily be infringed without an infringement of the others, but where your patent consists not of any new elements, but is the combination of old elements, how could any one of them be infringed without infringing the entire combination, or vice versa, if all of them are not infringed how can any one of them be infringed?"

Walker on Patents, page 169: "Two claims are not co-extensive which specify different combination of parts of process, machine or manufacture, even where some of those parts are in each of the combinations."

Suffolk Co. v. Hayden, 3 Wallace, 315.

“Because the claim which specifies fewest of those parts may be infringed by what will not infringe any claim specifying more of those parts. And two claims are not co-extensive, where one of them specifies all the features of any or all of the parts of its subject, while the other omits one of those features, because the latter may be infringed by processes or mechanisms which lack that feature, while the former cannot.”

This question is fundamental, hence it is not necessary to cite the numerous authorities in support of the principle governing the rule of law applicable to independent claims.

Specification 42.

Under this specification, that the court erred in overruling motion to set aside the verdict and grant the plaintiff a new trial, each of the questions raised therein have been separately considered under one of the foregoing specifications.

The Order on a Reversal.

It is the established law that where a new trial would subserve the ends of justice, it should be

granted. The facts of this case speak with compelling force that justice has been defeated.

We believe that this court will hold that it was error not to grant the motion of the plaintiffs for a directed verdict.

Both sides introduced all of their evidence and it seems to us there is no occasion to send this case back for a re-trial on the question of infringement. The rights to recover is a question of law on the facts proved and admitted.

There is no reason to believe that these facts will be changed on a new trial. The defendant was granted a continuance for nearly a year by the court as the record will show (R. 19 to 29) and fail to produce the witnesses at the trial as alleged in their affidavits for continuance.

The court should reverse this case with instructions to the lower court to grant a new trial on the question of the amount of damages only. This would be in keeping with the recent tendency of the courts all over the country to allow to a litigant one and only one fair and impartial trial on a given point. The defendant has had its trial on the question of infringement and the evidence at the trial entitles the plaintiff to recover as a matter of law.

That this case should be reversed with instructions to direct the jury to find a verdict for the plaintiff and to limit the inquiry on a new trial to the amount of the verdict, or in the alternative that a new trial should be granted on all the issues is respectfully submitted.

JOSEPH L. REED, and

RICHARD J. COOK,

Attorneys for Appellant.

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**IN THE UNITED STATES
CIRCUIT COURT OF APPEALS
FOR THE NINTH CIRCUIT**

HENRY W. BASSETT,

Plaintiff in Error,

vs.

THE ERICKSON CONSTRUCTION

COMPANY, a corporation,

Defendant in Error.

No.....

**Appeal from the United States District Court
for the Western District of Washington
Northern Division.**

HON. CLINTON W. HOWARD, JUDGE.

Brief for Defendant in Error

The defendant's position is that the questions before this court are those of fact and not of law. The issues upon which this case was tried before a jury resulting in a verdict for the defendant clearly presented the question as to whether this so-called

invention of the plaintiff was in fact new, novel or useful. The court instructed the jury upon this point, to which no exceptions were taken, and upon which no argument is produced by the plaintiff in his brief now before this court (Tr. pp. 328, 329). A complete analysis of the testimony leaves no doubt whatever that this so-called invention was neither new, novel nor useful, but on the contrary was an attempt to make an improvement of an old thing, but which in fact was not workable—all reliable testimony going to the effect that it was absolutely impossible of operation.

COMMENTS ON PLAINTIFF'S BRIEF.

We mean no discourtesy to the plaintiff by apologizing at this time to the court for our inability to clearly grasp what points the plaintiff is trying to make. In so far as we can analyze plaintiff's brief the argument seems in most parts to be a criticism (a) of the defendant's cross-examination of the plaintiff's witnesses, (b) of the refusal of the court to permit the plaintiff to introduce evidence upon the question of the measure of damages, and (c) the failure of the court to give certain instructions requested by the plaintiff.

At the trial the plaintiff offered in evidence an

exhibit claimed by him to be an exact model embracing the principles contained in the patent (Tr. p. 49). The cross-examination complained of relates almost entirely to this device. The testimony disclosed the fact that the segments contained in this model were different from those that this same plaintiff had offered in another case in which testimony was taken before a commissioner. The cross-examination bore directly upon the point that this so-called invention was not workable, and had not been used by the plaintiff, and had never been used by any one else, and that it could not be operated. We have no quarrel in the main with the principles of law that are announced and commented upon at length by plaintiff if they properly applied, but in this case the fault lies in the premise, and it serves no purpose in commenting upon plaintiff's various groups of authorities. In cross-examination we were clearly within our rights. We need, therefore, make no further comment upon all that portion of the brief which at great length labors with our method of cross-examining the plaintiff's witnesses.

The court's rulings throughout upon the question of the measure of damages are sustained by this court. It is pleaded in the complaint (Tr. p. 5) that the plaintiff had this invention for "his own

invention of the plaintiff was in fact new, novel or useful. The court instructed the jury upon this point, to which no exceptions were taken, and upon which no argument is produced by the plaintiff in his brief now before this court (Tr. pp. 328, 329). A complete analysis of the testimony leaves no doubt whatever that this so-called invention was neither new, novel nor useful, but on the contrary was an attempt to make an improvement of an old thing, but which in fact was not workable—all reliable testimony going to the effect that it was absolutely impossible of operation.

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exclusive use and benefit and did not manufacture the same for sale". The plaintiff would be limited to nominal damages only as was announced by this court in *McNamara vs. City of Seattle*, 81 Fed. 865. This exact question was raised in the *McNamara* case. The court says:

"There is no remedy at law for the infringement of a patent unless the plaintiff show actual damage to himself, or show that prior to the act of infringement a sufficient number of sales of the patented invention, or of the right to use the same, had been made at a settled price, to establish a royalty, or a market price, for the use of the invention, so that by the defendant's act his market had been impaired. There had been no such established royalty in the present case. *The invention had not been used except by the plaintiff in error, and the right to use the same had not been sold to any one.*"

The plaintiff could not have better stated the facts in his pleadings to make a clean cut application of the principle of law announced in the *McNamara* case.

The remaining portion of plaintiff's brief is devoted to a criticism of the instructions. Much of this criticism relates to the instructions which the plaintiff proposed and which the court refused to give, but we submit the instructions as a whole as given were a clear, concise annunciation of the

law governing combination patents (Tr. p. 320, *et seq.*).

The requested instructions, to the refusal of which plaintiff devotes a great deal of time in his brief, are almost wholly upon abstract questions relating to patents. The Supreme Court in the case of *Haines vs. McLaughlin*, 135 U. S. 584 (34 L. Ed. 290, 295), holds that it is not error to refuse to instruct as to abstract questions, nor should instructions be given upon hypothetical statements of fact. This seems to cover the complaint which plaintiff is making.

The plaintiff's specifications of error (Br. p. 74) relate to an instruction given by the court regarding a work by Reid on Concrete and Reinforced Concrete Construction, which was admitted in evidence after the plaintiff had stated that he had had the same in his possession prior to making his application for a patent. The purpose of this, as the testimony discloses, was to show the state of the prior art as it related to concrete construction, and the knowledge which the plaintiff had of these facts by reason of his having had this particular authority in his possession. We submit there is no error in this instruction.

Likewise the same instruction was given with reference to certain patents that were offered in evidence (Br. p. 79) "for the purpose of showing the state of the art at the time". The evidence was overwhelming that in a multitude of ways the prior art was well developed.

The plaintiff seems to rest most of his discussion of these instructions upon the question of the law as it relates to combination patents, and the elements in the various specifications of such a combination. We will discuss the law later. The principle of law contended for by the plaintiff at the trial was expressed by the court in an instruction covering this question of combination patents. We do not see, therefore, how they can complain. The jury asked the court the following question:

"Q. Will a duplication of one individual element be an infringement, or, would it require a duplication of all elements to constitute an infringement?"

To this inquiry the court instructed them as follows (Tr. pp. 343, 344):

"It has been admitted by the plaintiff in this case that his patent is not for any individual element or elements claimed to be new, but consists of a new combination of old elements. This combina-

tion is set forth in the respective claims of the patent, and I think that for the purposes of your inquiry each claim would be considered separately by itself, but in so considering it before you could find that that particular claim or any particular claim had been infringed, that is in the event that you find this was not a pioneer patent, as you were more fully instructed in the original instructions, if you should find that this was not a pioneer patent, then as you take up each claim of the patent, No. 1, 5 and 6, before you can find an infringement upon any one of those claims you must find that the defendant has used all the elements there in exactly the same way to produce the same result; if you find that that is not the case, then there has been no infringement upon that claim, in the event you should find it not to be a pioneer invention; if you should find it to be a pioneer invention, then the use of equivalents to produce the same result would constitute infringement."

This is the instruction that plaintiff's counsel asked the court to give in this instance, and it embraces practically the same contention that counsel for the plaintiff apparently were endeavoring to make at intervals throughout the trial. After they get the instruction they then seem to think that something is wrong and say regarding it:

"The court's additional instruction, that 'each claim would be considered separately by itself', at this late hour of the trial, with its many qualifications, surely, could not, in the face of the instructions as to verdicts, together with all that preceded

tending to convey an erroneous impression in the minds of the jury cure the harmful and prejudicial omission to properly instruct upon the questions considered." (Br. p. 104).

We do not consider further comment upon this general line of presenting the question to the court as entitled to further consideration.

It must conclusively appear that plaintiff's entire brief is made up of a discussion of hornbook principles of law, disconnected by any proper application to the principles controlling in the case at bar. They make practically no comment upon the facts, but content themselves with criticism, which is not well founded.

We pass now to a consideration of the case itself and shall endeavor to make our statement within such limits as the case deserves. We shall first discuss the facts as they relate to this so-called invention, believing that by so doing it will appear as patent that the plaintiff had nothing that was new, novel or useful.

PLAINTIFF DID NOT HAVE A PATENT- ABLE INVENTION.

The necessity for forms for moulded conduits arose by reason of the City of Seattle constructing

certain trunk sewers and making the same out of concrete. The plaintiff was the foreman for Grant Smith & Company, who had one of these sections of sewer for construction. The testimony is to the effect that the foreman upon the job with the carpenter worked for some time in order to make a form that could be used; that in the process of building this sewer they did make a form that they used, but it was not the form made on the model of plaintiff's patent. This form was in fact never used. It would appear that each carpenter who came upon the job would try to improve the form, and some would do one thing and some another in order to make it workable (Tr. p. 163).

This was the testimony of one of plaintiff's witnesses who worked under the plaintiff. Some of the workmen who were upon the Grant Smith job, of which Bassett was the foreman, worked for the defendant upon its sewer construction, and likewise the city inspectors were in some instances the same on both jobs. A. H. Alexander, a witness on behalf of the plaintiff, testified that the forms used by the defendant differed from those used by the plaintiff (Tr. p. 169). Mr. Alexander was an inspector for the City of Seattle on this work. Swan

Peterson, a contractor, was called as a witness on behalf of the plaintiff, and likewise testified that the forms used by the defendant differed from those used by the plaintiff. The defendant throughout the trial of the case contended that the plaintiff's patent could not be practically used. The fact that the plaintiff himself had never used it, and that there is no testimony to the effect that it ever was used, and the further testimony that it was not workable, would seem to leave no doubt as to its possessing any elements of invention or practicability. The defendant spared no pains in bringing to the court the best possible evidence upon this question.

Capt. Harry George, a graduate of the United States Naval Academy at Annapolis, and a skilled mathematician, having had large experience in engineering work, was called as a witness for the defense. As illustrating his testimony he produced diagrams to show the manner in which plaintiff's claimed invention would operate when pressure was brought to bear upon it in manner and amount as would be necessary to be used as a form for moulded conduits. When asked if the system of bracing set forth in the plaintiff's patent would sustain the

pressure that would be necessary, he replied that it would not (Tr. p. 220), and gave at great length his reasons therefor. He also said that if this system of bracing were removed the form would naturally collapse (Tr. p. 225). He was asked to compare the action in this regard of the form used by the defendant with that shown in plaintiff's patent, and he replied that you might remove all of the interior bracing of the defendant's form and the integrity of the form would still be preserved (Tr. p. 225). Capt. George when asked the following questions gave the following answers:

“Q. Now, Captain, I direct your attention to the system of bracing in the invert and ask you to describe to the jury the difference between these two systems of bracing. First, let me ask you before you answer that question: Is this system of setting up the segments in figure 2 in any wise a duplication or a mechanical equivalent of the setting up of the segments in figure 1?

A. It is not in any shape or manner (interrupting).

A. (continuing) It is not the mechanical equivalent. It performs—setting up the wedges in the respective cases performs entirely different mechanical functions; in the one case—

Q. Does it produce the same result?

A. It does not.

Q. Is it operated in the same manner?

A. Not in the same manner and does not produce the same result." (Tr. p. 226.)

The patent calls for a method of construction that permits the segments of the upper portion to move peripherally within the segments of the invert. It also provides for an interlocking device at one end. One of the reasons why this device is not workable, and that the upper segments could not move peripherally within the segments of the invert, is because at one end the segments are interlocked with the segments of the section already constructed, and if you were to move the segments peripherally you could only do so at one end, and thus they would be twisted out of shape and become spiral in form. Captain George says there can be no peripheral motion with the plaintiff's form (Tr. p. 232). Speaking with reference to the mechanical skill necessary to produce what plaintiff claims is a patent, Captain George said: "My opinion is that from an examination of this drawing which has been presented to me I should say that the production, design and manufacture of the requisite forms to reproduce those special sections with fidelity would come within the purview of the ordinary and ex-

perienced pattern maker of average ability.” (Tr. p. 232.)

It is not necessary for us to go further into Capt. George’s analysis as it is clear and convincing that plaintiff’s patent cannot work; that if you attempted to use it the forms would collapse.

George B. Worley was another witness called on behalf of the defendant and who had had thirty-three years of engineering experience, and who for over four years had been with the City of Seattle, engaged at that time in the construction of sewers. He related the history of the way in which forms for moulded conduits for sewer construction in Seattle was gradually developed. Mr. Worley stated that the form of bracing used by the plaintiff was impracticable; also that the interlocking devices on the longitudinal ribs as shown by the plaintiff’s patent would be impracticable and could not be used; that the style and form of the bracing used by the defendant was so mechanically put together that it would stand alone if all the bracing was taken out, and that that of the plaintiff would collapse (Tr. pp. 252, 253). Throughout the plaintiff’s work the witness stated that there seemed to be no particular plan or scheme as to how the plaintiff was to use the bracings in his work (Tr. p. 256).

Jernum Dahl, another witness who had held a position with the engineering department of the City of Seattle as inspector of streets and sewers, and likewise an inspector on the Grant Smith job as well as upon the Erickson job, and who saw the forms that were used, testified that although he was upon the Bassett job at all times from the beginning until the close of the work, that Bassett never used the forms patented (Tr. pp. 259, 260).

Charles D. Haskins was produced also as an expert on behalf of the defendant and showed himself to be a man of wide and varied experience, having for many years been superintendent of the Western Electric Company in New York, and had passed upon the scope and merit of all patents that were offered to the electric company during the time he was superintendent of their factory. Mr. Haskins gave a history of the prior art of forms for moulded conduits of all descriptions. He analyzed the plaintiff's patent at great length showing wherein all of the elements were old, the combination was old, and there was no new element produced by this combination. "The witness then testified that assuming the mechanical structure of the plaintiff's

device to be in accordance with the plans and specifications, that it could not be used for the purpose for which it was designed; that the structure was wholly inadequate for the service that it was called upon to perform; that the combinations of elements in the defendant's device were not disclosed at all by the device of the patent in suit, since there were no segments in the invert wholly without and further from the center than the segments of the device of the patent in suit, and that the defendant's device did not operate by the same mode of operation." (Tr. p. 281.)

We thus have from very high authority testimony which negatives every claim of the plaintiff to a possibility of infringement by the defendant. Comparing the device of the plaintiff as exhibited by his patent with that of the defendant as used by it, Mr. Haskins stated that the bracing in the defendant's device performs an absolutely different function from that in the plaintiff's patent and has not the same mode of operation.

We have reviewed the testimony in this case with a view to bringing to the court the real essence thereof and to enable the court to reach a decision

in this case upon the controlling questions involved without being obliged to wade through 400 pages of record, which by reference to models and parts of models is unintelligible reading without having those models before the court, and by referring to them as you proceed to an analysis of the testimony.

DESCRIPTION OF PLAINTIFF'S PATENT.

This so-called invention of plaintiff consists in a word of forms for making moulded conduits. He admits that every element in these forms is old, but that the combination is new. He does not claim that the *result* is new. We, therefore, have, conceding plaintiff's full position to be true, old elements combined in a new way to produce an old result.

It is a well known principle of law that a combination of old elements to be patentable must operate in a new way to produce a new or improved result.

Fellows vs. Borden's Con. M. Co., 180 Fed. 421.

The result produced by the plaintiff's patent, assuming for the moment that it is workable at all, is a concrete circular sewer which is not a new result as concrete circular sewers have been known for

decades. His patent then covers a *method* to obtain a result. Speaking of combination patents the court said in *Hoffman vs. Young*, 2 Fed 77:

“It would seem, however, from the decisions, that two things are always necessary—*First*, a novel assemblage of parts, exhibiting invention; *second*, the co-operation of the parts in producing a new result.”

In passing upon the question of the patentability of binding a rubber eraser to one end of a piece of wood which is also a lead pencil, the court in *Reckendorfer vs. Faber*, 92 U. S. 347, 23 L. Ed. 719-724, says:

“The combination, to be patentable, must produce a different force or effect, or result in the combined forces or processes, from that given by their separate parts.”

Again in *Tubelt Co. vs. Friedman*, 158 Fed. 439, the court says:

“It will not do to find patentable invention in a device or structure where all its elements are found in the prior art, and all the alleged inventor does to produce it is to take one of the prior patented devices, and leave out one of its elements and substitute in place thereof a well-known equivalent taken from another device of the same kind, where it was used for the same purpose, operated in the same way, and produced the same results as is re-

quired in its new location, and the sole result of the substitution is that the substituted element operates or works a little better than did the displaced one, and thereby the operation of the alleged new structure is somewhat improved. *This is improvement, but not invention.* It may be a successful experiment, but there is no novelty. 'While a combination of old elements producing a new and useful result may be patentable, if the combination is merely the assembling of old elements producing no new and useful result invention is not shown.' "

Again, in *Anton vs. Grier Bros. Co.*, 185 Fed. 796, the court says (p. 798):

"To sustain a patent with a combination of old elements, it is well settled that a new result must be obtained, which is due to the joint and co-operating action of all the old elements. Either this must be accomplished, or a new machine of distinct character and function must be constructed. If several old devices are so put together to produce even a better machine or instrument than was formerly in use, but each of the old devices does what it had formerly done in the instrument or machine from which it was borrowed, and in the old way, without uniting with other old devices to perform any joint function, it seems that the combination is not patentable."

Many cases are cited by the court in this opinion.

Even if the plaintiff in this case had not admitted that all the elements in his patent were old, yet it follows as a matter of law, when he claims

simply a combination, the law conclusively presumes all the elements to be old.

Mr. Justice Brown in *Richards vs. Chase Elevator Co.*, 159 U. S. 477, 40 L. Ed. 225, citing from page 486, says:

“Failure to claim either one of the elements separately raises a presumption that no one of them is novel.”

In the plaintiff's patent he does not claim any elements separately. The facts are that he could with no more show of sustaining his position claim any of these elements as new than one could claim the staves of a barrel or the hoops surrounding a barrel as being new. Plaintiff's so-called patent is a mere aggregation of old elements for an old purpose and applied in an old and well known manner as is conclusively shown by the evidence bearing upon the state of the art in this case. All one needs to do is to look at the patent itself to see that this is true.

The court said in *National Tube Co. vs. Spang et al.*, 135 Fed. 351, 359, in discussing that which amounted to mere improvement:

“Each forward step prepares the way for another, and to burden a great industry with a mon-

opoly to each improver for every step thus made, except where marked by an advance greater than mere progressive skill, is unjust in principle and hostile to progress."

It has been claimed throughout the trial of this case by the defendant that the forms for moulded conduits which were used by the defendant and which the plaintiff sought to employ while he was foreman of Grant Smith & Company, were nothing more than that which could be produced by any carpenter who was given a certain condition to meet, furthermore that he could practically meet it in no other way than in this manner. The plaintiff's carpenters experimented on the job, as is disclosed from the evidence. They evidently did not make a very successful experimentation, for the plaintiff seems to have been able to pour only about three sections of sewer per week, while the defendant was able to pour about twenty-one sections per week (Tr. p. 257). This is stated to simply show that the plaintiff was experimenting all the time.

The court said in *Lord & Burnham Co. vs. Payne*, 190 Fed. 172, 178:

"Every result obtained by deliberate reflection and experimentation, with well-known appliances, or parts thereof, is not necessarily invention within

the meaning of our patent laws. They are not necessarily such even if they produce a superior benefit or effect a complete change in the means theretofore used in obtaining the same or a better result. * * *

“‘In this day of increasing demand for new and enlarged mechanical appliances, the first natural result is the production of a large class of skilled and experienced mechanics and artisans, and second, a more studious and constant development in applied mechanics. And, as such advance plainly points out to the attentive and assiduous workman the natural, larger, practical adaptation of existing known mechanical devices, to invest each one of these developments with the immunity of a monopolizing patent would not only be a perversion of the term ‘invention’ but would utterly extinguish the doctrine of mechanical equivalents.’ ”

Again, we desire to refer by way of emphasis to this so-called patent being nothing that embraced inventive genius. In fact the forms that were used by the plaintiff, as well as those used by the defendant, were the product of experimentation by the carpenters who were upon the job. As Capt. Harry George said, The production of these forms was nothing but what would fall within the range of a pattern maker of ordinary skill. (Tr. 232.) It will never be lost sight of that in fact the forms used by the plaintiff were different from those claimed in his patent. The one man who was upon

the job at all times as an inspector for the city of Seattle and a skilled man in that line testified that the plaintiff never did use the forms embraced within his patent (Tr. p. 259), and the testimony is overwhelming that in truth and in fact he could not have used these forms for which he claims a patent as they were unworkable (Tr. pp. 220, 252, 259 and 280). The development of the forms in the city of Seattle embraced practically three stages. First, the plaintiff's carpenters evolved a general plan for making these forms, which was unworkable, and from which plaintiff copies his so-called patent. These same carpenters subsequently made improvements which differed radically from their first efforts, and which they were able to work up in an improved manner. Subsequent to this the defendant developed the forms which it used in a more perfect manner. This is the progress made, ranging over a period of some two years.

The court said, in substance, in *Westinghouse Air Brake Co. vs. New York Air Brake Co.*, 112 Fed. 428, that an invention which succeeds, is not to be suppressed by means of a patent which failed, and can never succeed.

Again, in the case of *General Electric Co. vs.*

Winsted Gas Co., 110 Fed. 963, the court held that an invention which was never useful enough to be used in any productive business, cannot be dragged across the road which leads toward success, and thus be made to prevent the progress of a useful art along that road.

We now come to the next question in this case.

WHAT CONSTITUTES INFRINGEMENT OF A COMBINATION PATENT?

We will first discuss the law bearing upon this question.

A combination is not infringed by the substitution of a new element, or of one that performs a substantially different function; or by the substitution of an old element, not known at the date of the patent as a proper substitute for the omitted ingredient; or by a new combination of the existing elements of a patented combination.

Rowell vs. Lindsay, 6 Fed. 290.

The court said, in *Electric R. R. Signal Co. vs. Hall Railway Signal Co.*, 114 U. S. 87, 29 L. Ed. 96:

“The object of the patented combination was the accomplishment of a particular result. * * * *
But this result or idea is not monopolized by the

patent. The thing patented is the particular means devised by the inventor by which that result is attained, leaving it open to any other inventor to accomplish the same result by other means."

The fact that the plaintiff produced an old result by the combination of old elements is no reason why the defendant should not be allowed to make a new combination of such elements to produce the same result, so long it does not use the combination claimed by the plaintiff.

Otis Bros. Mfg. Co. vs. Crane Bros. Mfg. Co.,
27 Fed. 556.

Omission of one ingredient of a combination covered by any claim of a patent averts any charge of infringement based on that claim.

Prouty vs. Ruggles, 16 Peters 341, 10 L. Ed. 985.

Eames vs. Godfrey, 1 Wallace 78, 17 L. Ed. 547.

Case vs. Brown, 2 Wallace 328, 17 L. Ed. 817.

Dunbar vs. Meyers, 94 U. S. 187, 24 L. Ed. 34.

Fuller vs. Yentzer, 94 U. S. 297, 24 L. Ed. 103.

Rowell vs. Lindsay, 113 U. S. 102, 28 L. Ed. 906.

Shepard vs. Carrigan, 116 U. S. 597, 29 L. Ed. 723.

Sharp vs. Reissner, 119 U. S. 636, 30 L. Ed. 507.

Derby vs. Thompson, 146 U. S. 482, 36 L. Ed. 1051.

Weatherhead vs. Coupe, 147 U. S. 322, 37 L. Ed. 188.

Dobson vs. Cubley, 149 U. S. 120, 37 L. Ed. 671.

Wright vs. Yuengling, 155 U. S. 52, 39 L. Ed. 64.

Black Diamond Coal Co. vs. Excelsior Co., 156 U. S. 617, 39 L. Ed. 553.

A combination is an entirety. If one of its elements is omitted, the thing claimed disappears. Every part of the combination claimed is conclusively presumed to be material to the combination.

Vance vs. Campbell, 1 Black. 430.

Fay vs. Cordesman, 109 U. S. 420, 27 L. Ed. 797.

Sargent vs. Lock Co., 114 U. S. 86, 29 L. Ed. 67.

Shepard vs. Carrigan, 116 U. S. 597, 29 L. Ed. 723.

Yale Lock Co. vs. Sargent, 117 U. S. 425, 29 L. Ed. 950.

McClain vs. Ortmyer, 141 U. S. 425, 35 L. Ed. 80.

Hubbell vs. United States, 179 U. S. 82, 45 L. Ed. 95.

A combination is not infringed unless all its elements as they are claimed are used, whether they are essential or not.

Portland Mining Co. vs. Hermann, 160 Fed. 91, 99, and 87 C. C. A. 247.

To the same effect see:

Faurot vs. Hawes, 3 Fed. 456.

Rowell vs. Lindsay, 6 Fed. 290, affirmed in 113 U. S. 96.

Matteson vs. Caine, 17 Fed. 525.

Campbell Printing-Press & Mfg. Co. vs. Duplex Printing-Press Co., 86 Fed. 315.

Thompson vs. Second Ave. Traction Co., 89 Fed. 321.

Knapp vs. Morss, 150 U. S. 221, 37 L. Ed. 1059.

Electric R. R. Signal Co. vs. Hall Railway Signal Co., 114 U. S. 87.

Claims 1, 5 and 6 are the portions of the patent that plaintiff asserts defendant has infringed. In claim 1 the moulding of the longitudinal segments by the restraining band "enough further from the center than the segments adjoining to permit the edges of the latter moving peripherally within the invert segments" is the essence of this claim. The evidence is all clearly to the effect that the defendant used no such device for the best of reasons that it could not be operated (see exhibits).

Claim 5 particularly relates to “interlocking engagement between segments” and “means for expanding the segments peripherally against this band.” Again we may say that the testimony is undisputed that the defendant had no interlocking devices such as the plaintiff describes, and the peripheral motion was wholly wanting.

Claim 6 particularly relates to the placing of the segments in such manner so that the “segments may slide one over the other, transverse sills spanning the invert segments and serving as an abutment for the other segments,” and in this, as in the other two, the defendant had nothing that could even so much as be argued to be a mechanical equivalent.

As the court said in *Electric Protection Co. vs. American Bank Protection Co.*, 184 Fed. 916, 923:

“To sustain the charge of infringement the infringing device must be substantially identical with the one alleged to be infringed in (1) the result attained; (2) the means of attaining that result; and (3) the manner in which its different parts operate and co-operate to produce that result. If the devices are substantially different in either of these respects the charge of infringement is not sustained.”

“A patent for a combination of well-known mechanical appliances is limited to the combined

apparatus as specified, and no great liberality in applying the doctrine of mechanical equivalents can be indulged in its favor, and no one is an infringer unless he uses all of the elements claimed in substantially the same mode of operation."

Portland Gold Mining Co. vs. Hermann, 160 Fed. 91.

See also *Union Match Co. vs. Diamond Match Co.*, 162 Fed. 148.

As the court said, in *Corrington vs. Westinghouse Air Brake Co.*, 173 Fed. 69, 80:

"To infringe the combination, the defendant must use the elements thereof in combination, and all of them, or their equivalents, and the combination must operate in substantially the same way to produce substantially the same result."

See also upon this same point:

Ohl & Co. vs. Falstrom & Tornquist Co., Inc., 175 Fed. 67.

Morton Trust Co. vs. Standard Steel Car Co., 177 Fed. 931.

LIMITATIONS IMPOSED BY THE PATENT OFFICE.

Under the Revised Statutes, §4889: "The drawings accompanying the specifications and referred to in the descriptive part thereof will be examined to ascertain the true meaning of the terms used in describing the invention."

This is the matter which is submitted to the patent office and when it arrives there the same is examined, and thereafter the patent must be construed in the light of the limitations imposed by the patent office as a condition precedent to the grant. In the case at bar the plaintiff made several unsuccessful attempts to obtain a patent, and the file wrapper and contents in the record discloses the way in which the patent office declined to issue to him a patent for the very things which the defendant subsequently successfully employed in the building of its sewers. The plaintiff became bound by the rejection of his claim on references cited in the patent office and when he accepted a patent on an amended claim he became thereby estopped from maintaining that the amended claim covers the combination shown in the references, and from claiming that it has the breadth of the claim that was rejected.

National Hollow Brake-Beam Co. et al., vs. Interchangeable Brake-Beam Co., 106 Fed. 693, 714.

Crawford vs. Heysinger, 123 U. S. 589, 31 L. Ed. 269.

Roemer vs. Peddie, 132 U. S. 313, 33 L. Ed. 382.

Knapp vs. Morss, 150 U. S. 221, 37 L. Ed. 1059.

Morgan Envelope Co. vs. Albany Perforated Wrapper Paper Co., 152 U. S. 425, 38 L. Ed. 50.

The court said, *Sargent vs. Hall Safe & Lock Co.*, 114 U. S. 63, 29 L. Ed. 67, 76:

“In patents for combinations of mechanism, limitations and provisos, imposed by the inventor, especially such as were introduced into an application after it has been persistently rejected, must be strictly construed against the inventor and in favor of the public, and looked upon as in the nature of disclaimers.”

The above limitations imposed by the patent office are pertinent in connection with claims 1 and 5 of the plaintiff's patent. Mr. Reynolds, the plaintiff's expert and the attorney who obtained the patent for the plaintiff, testified that claim 5 was a modification of claim 9, which plans were made to meet the objections which caused the examiner to reject the original claim 9 (see certified copy of file wrapper and contents).

Referring to the file wrapper of the patent in suit, it will be seen that the original claim 9, like claim 5, included “segments having an outer lagging or skin and transverse ribs, the lagging extending

beyond the transverse ribs at one end and the ribs extending beyond the lagging at the other end," but in his claim 9, which was rejected, the plaintiff adds "whereby the segments of a completed section will directly engage and support the segments and ribs of the section which is being moulded." This language would of course include sections of stave pipes provided with telescopic joints of well known construction. In claim 5 of plaintiff's patent we find that "segments composed of outer lagging and ribs secured thereto, said ribs including transverse ribs at each end, the transverse rib at one end projecting beyond the ends of the lagging and at the other end the lagging extending beyond the rib, whereby interlocking engagement between segments may be obtained." Manifestly the term "transverse rib" in the singular number and the term "interlocking engagement" in the 5th claim is used in place of the term "transverse ribs" in the original claim 9 to make clear that such 5th claim is restricted to the exact construction shown in the drawings, which construction is described by the words commencing with line 63 on page 2 of the patent which reads, "In some cases the outer skin of the segments of the new section will be outside the transverse ribs

of the segments of the preceding section and in some cases this condition will be reversed. Also, the ends of the longitudinal ribs project half of the thickness of the transverse ribs at one end and terminate at the center line of the transverse ribs at the other end, whereby the ends of the segments of adjoining segments interlock to secure exact registry and to prevent peripheral displacement. The segments of the completed section of conduit thus support and exactly locate the segments which are set up for molding a new section." Clearly, the term "exactly locate" refers to a prevention of movement in any direction by reason of the interlocking of the ribs of the completed section with the ribs of the mold for the new section as clearly illustrated in the drawing, for instance, as one may interlock the fingers of two hands, and moreover, the word "also" serves to point out the outer skin of the different segments of one section that are interlocked with the outer skin of the other section in the same manner that the longitudinal ribs of both sections are interlocked, such description exactly describing the invention as clearly illustrated in figure 2 of the drawings of the plaintiff's patent.

Moreover, claim 5 of the plaintiff's patent re-

fers to no offset or recess in its restraining band, and, therefore, unless the claim is restricted specifically to the interlocking structure illustrated in figure 2, such claim would cover many devices of the prior art. Further said claim 5 specifically points out as an element "means for expanding the segments peripherally against this band," but no such means are illustrated in the drawings of the patent or described in any portion of the specification, nor are any such means useful or desirable in the structure described by the plaintiff's patent. Means are shown, however, for contracting the segments peripherally to cause them to expand radially outward against the band.

It is thus seen that claim 5 of the plaintiff's patent, so far as it is intelligible, is restricted to the exact structure shown in the drawing, and further that it is inaccurate, contradictory and ambiguous.

We now take up and discuss claim 1 in the light of the file wrapper and its contents. Claim 1 reads as follows:

"An inner form for molded conduits comprising longitudinal segments adapted to outline the invert, other longitudinal segments adapted to outline the remainder of the conduit, a restraining band adapted to surround and locate said segments and having

its inner edge recessed to hold the invert segments enough farther from the center than the segments adjoining to permit the edges of the latter moving peripherally within the invert segments, and means for peripherally expanding those segments above the invert."

Such claim does not agree with the drawings and description of the invention as set forth in the patent. The claim is ambiguous, contradictory and inaccurate. It is ambiguous because it says that the segments which form the arch portion of the mold may be peripherally expanded by some means which it does not describe or specify. No such means are illustrated by the drawings, and no such means can be found in the model which the plaintiff produced in court. Moreover, a peripheral expansion of such segments is undesirable in the structure illustrated by the drawings and described in the specification; and in the operation of assembling such structure no peripheral expansion of such arch segments is ever effected. On the contrary, such arch segments are contracted peripherally, forced closer together to an extent that compresses the wood of which they may be made so that their peripheral dimension is contracted or shortened nearly to the extent of the combined thickness of

the wedges 13 driven in between the ends of the sill 6 and the adjacent arch segments 3 and 3.

In effecting this peripheral contraction or the shortening of the peripheral dimension of the assembled arch segments, the wedges 13 are aided by the restraining band or template which serves to limit the extent of a *radial* expansion of such segments, which radial expansion takes place in response to the application of the force of the wedges 13 that serves to contract or shorten the peripheral dimension of such assembled arch segments.

Thus the 1st claim refers to means for causing peripheral expansion of the arch segments, which means are not present in the alleged invention and which peripheral expansion does not occur in the use thereof, and it does not refer to any *radial* expansion of such arch segments, nor to any means for producing such necessary radial expansion, hence such claim is ambiguous, contradictory and inaccurate.

As bearing upon these self-imposed limitations which have arisen in this case by the repeated application for a patent and the modifications of these applications, see the following cases:

Matheson vs. Campbell, 69 Fed. 597.

Groth vs. International Postal Supply Co.,
61 Fed. 284.

The language in any patent must not be ambiguous, contradictory or inaccurate.

McClain vs. Ortmyer, 141 U. S. 419.

Celluloid Mfg. Co. vs. Arlington Mfg. Co.,
44 Fed. 81.

The plaintiff's claim must be construed in the light of the drawings attached thereto where there is any ambiguity or indefiniteness.

Stetson vs. Herreshoff Mfg. Co., 113 Fed. 952.

DEFENDANT'S FORMS FOR MOULDED CONDUITS.

The defendant has never at any time attempted to get a patent upon any portion of the form for moulded conduits used by it and which proved successful, for the all sufficient reason that every principle therein involved is as common and as well known as those used in making wooden barrels. The device claimed by the plaintiff to have been infringed was in fact never used by himself, was not a workable contrivance, and did not embrace the elements that made the defendant's device workable. The defendant did not have peripheral motion to its segments. It did not have the interlocking device. Its segments would not slide one over the other, nor did the transverse sills spanning the

invert serve as an abutment for the other segments. The three claims which the plaintiff alleges to be infringed, each embrace one of these elements, which was wholly lacking in the defendant's device, to say nothing about the scores of other combinations used by the defendant which are lacking in the plaintiff's device. As the testimony shows if you were to remove the bracing from the plaintiff's device the whole structure would collapse, while with the device of the defendant the bracing might be entirely removed and yet the form would maintain its integrity throughout. With the plaintiff's device, as is shown by the testimony of the experts, even though it were braced as plaintiff illustrates, it would collapse because the force that would be applied in the pouring of the cement around it would produce pressure where it was not braced, and hence could not be used at all, while the system used by the defendant was worked out upon the principle of sustaining the form at the points where the pressure would be brought, hence making it a workable and practicable thing.

The plaintiff, assuming for the moment that his device is workable—which it is not—produced an old result by combining old elements. It is suffi-

cient to avoid infringement, that the defendant while producing the same result, namely, a concrete sewer, did so by a different combination of the old elements that were like those of the plaintiff and by introducing also therein some new elements that were not used by the plaintiff, which distinguishes the defendant's workable device from that of the plaintiff's unworkable trinket.

We respectfully submit that there is no reversible error in this case. The plaintiff seeks to have the cause sent back, not for a new trial but "with instructions to direct the jury to find a verdict for the plaintiff and to limit inquiry on a new trial to the amount of the verdict." We are perfectly willing to stand upon this record, and submit that the verdict of the jury should not be disturbed. This court will satisfy itself as we believe in a short time that the plaintiff is chasing a mere phantom, and that he has nothing in fact that is patentable.

Respectfully submitted,

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United States
Circuit Court of Appeals
For the Ninth Circuit

HENRY W. BASSETT,

Plaintiff in Error,

vs.

THE ERICKSON CONSTRUCTION COMPANY,
a Corporation,

Defendant in Error.

WRIT OF ERROR FROM THE UNITED
STATES DISTRICT COURT FOR THE
WESTERN DISTRICT OF WASHINGTON,
NORTHERN DIVISION.

HON. CLINTON W. HOWARD, Judge.

REPLY BRIEF OF PLAINTIFF IN ERROR

The opening paragraph in the defendant's brief discloses the fact that he is not familiar with patent law procedure; he makes the statement that the questions before this Court are those of fact and not of law. Also that the Jury found no invention. The Jury's

requested instruction of Court (Record 343) conclusively disproves counsel's statement. They ask: "Will a duplication of one individual element be an infringement, or, would it require a duplication of all elements to constitute infringement."

It is enough to say that this case is brought before this Court on a writ of error, and not as an appeal from an equity proceeding. Hence the questions for review are errors of law.

In reply to the position taken by the defendant in regard to the question of the measure of damages (Defendant's Brief, page 5), wherein he quotes the decision of *McNamara, vs. City of Seattle*, 81 Fed. 865, as in point, it is not in any sense an analagous reference to the plaintiff's case. *McNamara* was an employee of the City of Seattle when he conceived of his invention. He had never used it himself, and the Court so stated that it appeared that it had not been used by anyone other than the City of Seattle.

In this case, the plaintiff has used his invention in actual construction work, also he alleges that the defendant has used his invention embodied in his patent, and it is a matter of record in the District Court of Washington, Northern Division, that a suit in equity is therein pending, alleging that the Colson Construction Company is also infringing the plaintiff's patent.

Counsel for the defendant also refers to as much in his brief. It therefore follows that this invention has been used by two different parties other than plaintiff.

The only question raised as a basis for the measure

of damages by McNamara was a reasonable royalty, in the absence of an established royalty, and Judge Hanford, the presiding Judge, so ruled that in the absence of an established royalty, a reasonable royalty can become the measure of damages. The case was reversed by this Court following *Coupe vs. Royea*, holding that a reasonable royalty is not a proper basis to estimate the damages. There was no other evidence relied upon by McNamara to estimate damages. Consequently this Court had no further evidence to consider.

In the plaintiff's case, we have evidence tending to show the advantage gained by the plaintiff in time, labor, and material by the use of his patent, over and above forms not patented, and open to the public to use. The authorities bearing out this position are the only ones we are relying upon, which have nothing to do with a reasonable royalty. It therefore follows that the citation relied upon by the defendant, is not applicable, and not in point with the decisions cited by the plaintiff, and upon which he relies.

As to the testimony of Charles D. Haskins, defendant's brief 16, it is sufficient to all the Court's attention to the misstatement of fact appearing in the record, last paragraph, 277, wherein he testifies that the amendment to the specification requested by the Examiner of Patents in Paper No. 6, was made as the basis for Claim 5. By an inspection of that paper it will be clear to the Court that Claim 5, was allowed before the amendment to the specification was made.

Such a misstatement of fact destroys the weight that can be given to any of his testimony.

Defendant's brief, page 18, he misstates the position taken by plaintiff concerning the new result produced by his patent.

Plaintiff clearly brings this point out in his brief on page 100, the second paragraph, which refutes the statement made by defendant. Again, at the bottom of Defendant's brief, on page 18, alleging that the plaintiff's patent is simply designed to construct a concrete sewer which is not a new result. Clearly that is not an analysis of plaintiff's patent for the patent in the Claims, Drawings and the Specification, will show that it is designed to construct a moneletic sewer of a specific adaptation for the insertion of vitrified brick within the bottom of the interior core. The Record fails to disclose a patent of any character designed to construct such a sewer, nor was there any evidence introduced of material character showing that such a form had ever been in public use two years prior to application, or described in any printed publication. Hence, not only is the combination new, and produces a new result, but the means for constructing a moneletic sewer designed with a recess for the insertion of vitrified brick within the interior bottom core thereof, is entirely new.

At least Plaintiff's patent falls in that catagory of invention which marks an advance in the art to which it relates and has a right to invoke the law of mechanical equivalents which is incident thereto, in a proportionate degree.

Defendant's brief on page 26, gives definitions of abstract principles of the law governing the omission of one ingredient of a combination covered by any claim of patent averts any charge of infringement based on that claim.

Plaintiff admits that this is the law, as above stated; in fact, he made that statement in his own brief. Page 38.

Defendant merely cites references and does not point out the application wherein the defendant's device uses less elements than embodied in any one of the Claims alleged infringed by plaintiff other than Claim 5. That applies also to the definition appearing in defendant's brief, on page 27, where he makes an abstract statement of patent law without showing its application to the two devices based on the Claims of Plaintiff's patent; wherein the defendant fails to use all of the elements embodied in any one of the Claims alleged infringed other than Claim 5.

The defendant's brief is wholly lacking in any discussion of the questions of law raised by plaintiff's Assignment of Errors. He makes no defense whatsoever. He fails to reconcile his admission of infringement in the pleadings. He attempts, however, to define Claims 1, 5 and 6, of plaintiff's patent, beginning in his brief, page 28, second paragraph, and in his discussion of Claim 1, he clearly discloses that he has not grasped the legal significance of combination Claims when he makes the statement that the essence of Claim 1, resides in the function of a particular element of that combination. The law is that a com-

bination Claim is an entity, each element bearing the same relation of importance to the combination as the other. He furthermore misquotes the claim and has it read to the effect that the restraining band molds the longitudinal segments, instead of the concrete being molded by the action of the combination of elements recited therein.

The Defendant's brief, on page 31, alleges in effect that the plaintiff is relying on certain elements that were a part of certain Claims rejected by the examiner. There is no statement in record or in Plaintiff's brief wherein he is endeavoring to import elements in Claims 1, 5 and 6, which are not distinctly set forth therein.

Plaintiff admits that the law will not permit a patentee to claim as elements of his patent those elements which are not distinctly embodied in the respective Claims allowed.

Defendant again on the same page of his brief says plaintiff "made several unsuccessful attempts to obtain a patent." To the contrary, plaintiff's first attempt was successful; the Wrapper, File and Contents will show Claims 10 and 11 were allowed by the first action of examiner, and are numbers 6 and 7, verbatim in the patent.

The defendant in his brief, pages 34 and 35, where he gives his theory of the true construction of Claim 5, reads not from the Claim, but from the amendment added to the specification. As has been pointed out so often by plaintiff, Claim 5 was allowed before this amendment was added thereto. Counsel, however,

not content in this departure from sound practice, quotes from the specification and in his eagerness to read that construction as quoted into Claim 5, inadvertently misquotes the specification, Brief 35⁴, line 5, quotes as follows: "Whereby the ends of the segments of adjoining **segments** interlock to secure exact registry and to prevent peripheral displacement." This would prove his point, if true, but the specifications read as follows: (Record 38, line 8.) "Whereby the ends at the segments of adjoining **sections** interlock to secure exact registry and to prevent peripheral displacement."

Suffice it to say Claims 2, 3 and 4, contain that interlocking engagement peripherally which counsel is endeavoring to import into Claim 5, which obviously contains only the radial interlocking. Those claims distinctly state it, and, following the true sequence of patent office practice, were allowed subsequent to that amendment suggested in Paper No. 6, by Examiner.

The defendant again is in error concerning the principle of patent law governing the construction of Claims by calling attention to the fact that Claim 5, refers to no offset or recess in its restraining band. In other words, it is his understanding that every element in the patent must be recited in every Claim, which would simply limit a patent to one claim and one construction, only.

Again, on page 36, he makes the statement that the claim is ambiguous, contradictory and inaccurate, because the means referred to therein for peri-

pherally expanding is not described or specified or illustrated in the drawings. This clearly discloses that counsel for the defense fails to recognize the distinction between specific and generic claims. And furthermore that he cannot understand the drawings for the means, are illustrated therein described in the specification and referred to in the claims. He further makes the statement that the segments are not peripherally expanded but are contracted instead peripherally. He is contradicted in this statement by the Claims, and by his own experts, as will appear in the Record, page 290; also by his other experts, in the Record, page 237, line 11. Both experts testifying that the wedges 13 expand the segments peripherally. Again, on page 37, he refers to radial expansion; that the Claim is inoperative because it does not refer to that element.

It would be a physical impossibility to expand the segments radially after they have been expanded peripherally against the restraining band by the wedges 13.

The defendant's counsel again shows he is misinformed of Patent law wherein he makes the statement on page 38 of his brief that "the defendant has never at any time attempted to get a patent upon any **portion** of the form for moulded conduits used by it, and which proved successful," stating as his reasons, the elements, separately, are old. He fails to realize he could not get a patent on a **portion** of the form for moulded conduits, assuming the **elements were new**,

for a portion of the form would not be an operative combination. Hence, a patent could not be allowed.

With all due respect we submit counsel for the defense fails to offer any substantial reasons why this case should not be reversed. As to his admission of infringement in the pleadings, silence is his only response. Even the record discloses no defense concerning the Claims 1 and 6.

Have the Pleadings lost their meaning in Federal procedure? Is indifferent practice to be condoned?

In behalf of the plaintiff we urge that the case be reversed with instructions to the lower court to grant a new trial on the question of the amount of damages only; or in the alternative that a new trial be granted on all the issues, is respectfully submitted.

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